FOUNDED IN 1850

RAILWAY AGE

THE STANDARD RAILROAD WEEKLY FOR ALMOST A CENTURY

NOVEMBER 11, 1950

SAVE STEEL by using MAYARI R

A considerable tonnage of steel is being saved in various manufactured and fabricated products by the use of Mayari R in place of ordinary carbon steel. Mayari R goes farther because its substantially higher yield point permits it to be used in thinner-than-ordinary gages without sacrificing strength, corrosion-resistance, impact-resistance or any other essential properties.

Besides saving steel, the use of Mayari R helps in improving the design of many products. It often allows an appreciable reduction in deadweight that in turn cuts the cost of operation and maintenance.

Although it is a low-alloy, high-strength steel with superior properties, Mayari R can be worked and welded by the usual methods using ordinary shop equipment. It requires no heat-treatment and is used in the as-rolled condition.

You can find out more about this versatile steel and its many advantages from any of our sales offices. Write or phone for a copy of Catalog 259.

BETHLEHEM STEEL COMPANY, BETHLEHEM, PA.

On the Pacific Coast Bethlehem products are sold by Bethlehem Pacific Coast Steel Corporation. *Export Distributor:* Bethlehem Steel Export Corporation

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Mayari R *makes it lighter... stronger... longer lasting*

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An Important Aid

in improving *Running Time*

between two points

. . . Westinghouse HSC Brake Equipment

Any patronage-building improvement in *terminal-to-terminal* schedules must be brought about by improvements in intermediate *point-to-point* time—and that's where Westinghouse HSC electro-pneumatic brake equipment makes a big contribution.

This equipment permits later application when approaching speed zones, earlier release when leaving them. *Average* speeds can be substantially bettered, without increasing top speeds. Train control is smoother. Passenger comfort is enhanced.

HSC equipment, with supplementary controls, provides (1) simultaneous transmission of braking and release impulse to all cars in the train, (2) automatic proportioning of braking pressures to the speed for maximum retardation, and (3) "AP" Decelostat action, which immediately softens braking effort if wheel slip impends.

Westinghouse Air Brake Co.

WILMERDING, PA.

Vol. 129, No. 20 November 11, 1950

RAILWAY AGE

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IN THIS ISSUE

EDITORIAL COMMENT

GENERAL ARTICLES

DEPARTMENTS

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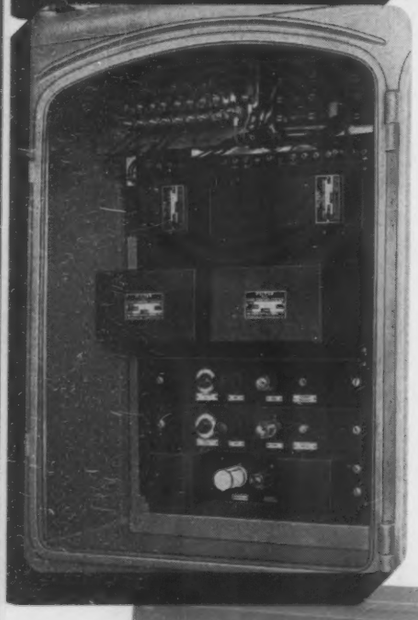
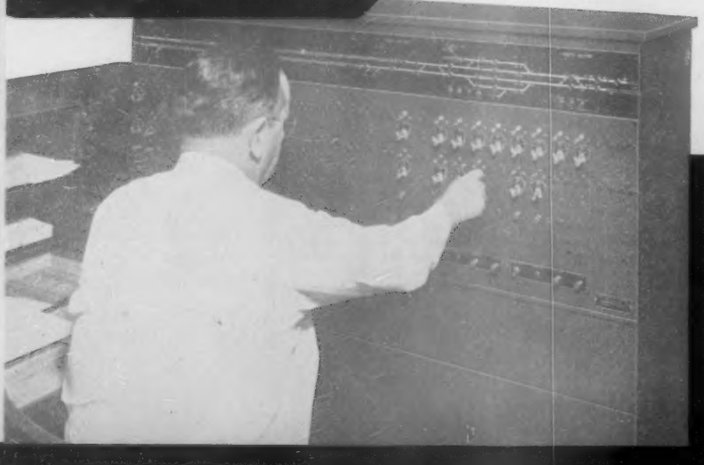
"UNION" BROAD-BAND, NARROW-BAND CODED CARRIER CONTROL

. . . for *Efficient* consolidation of REMOTE INTERLOCKINGS



Above: Broad-Band, Narrow-Band Equipment at a field terminal. *Below:* Repeater equipment.



"Union" Broad-Band, Narrow-Band Coded Carrier Control makes it easy to control a series of remote interlockings from one point, such as division headquarters, with maximum efficiency, flexibility and economy.

This new system is a further development of the well-known "Union" Coded Carrier Control System . . . pioneered by the Union Switch & Signal Co. in 1942 . . . and proved by the performance of dozens of C.T.C. installations covering hundreds of miles of track. It utilizes narrow-band frequencies—modulating broad-band carriers—in such a manner that the controls and indications for an extensive series of interlockings can be confined to a relatively narrow range of frequencies handled by a few broad-band carriers.

Undoubtedly, there are numerous places on your railroad where you could use the new "Union" Broad-Band, Narrow-Band Coded Carrier Control System to advantage. May we send a representative to show you how?

UNION SWITCH & SIGNAL COMPANY

SWISSVALE, PENNSYLVANIA

WEEK AT A GLANCE

UP TWO-THIRDS: As encouraging as anything that has appeared on the railroad horizon in a long, long time is the just-released report of operating income and expenses for September and 1950's first nine months, which is reviewed in detail on page 83. Briefly, while nine months' net railway operating income was up to $679.9 million, against $495.5 million in the corresponding period of 1949, net income, at $465 million, was a clear 66-2/3 per cent higher than the $279 million net reported through September of last year. Best of all, perhaps, is the fact that these results were achieved by cutting operating expenses 1.8 per cent in the face of an increase of 3.8 per cent in gross revenues. Since there has been no important decline in the major item of expense—labor costs—that result is in all probability a reflection of the billions of dollars which the railroads have spent in the past five years to improve their fixed properties and rolling stock, with the double purpose of improving service and reducing expenses. The old adage about the necessity of spending money to make money seems to be paying off.

"THE MILWAUKEE"—100 YEARS: On November 20 the Chicago, Milwaukee, St. Paul & Pacific will join the growing list of mid-western, western and southern railroads which are entitled to claim a full century of public transportation service—going back, in the Milwaukee's case, to the operation of the first train over the line of its earliest predecessor company, the Milwaukee & Mississippi. In recognition of the big road's hundredth birthday, all but one of the feature articles in this issue are given over to various aspects of Milwaukee history or operations. Leading the parade, on page 53, is a profusely illustrated review of the high spots of its 100-year history, followed, on page 59, by a more detailed survey of what the road has accomplished in the five years since its emergence from receivership to justify its forward-looking centennial slogan, "Opening Our Second Century." On page 64 is a brief account of what the Milwaukee has done to get maximum public relations value from its centennial celebrations—an article which may be particularly interesting to P.R. men of other railroads with centennials coming up. Milwaukee locomotive and car department developments are the subjects of separate articles, beginning, respectively, on pages 66 and 68, while passenger traffic is surveyed on page 70 and freight traffic on page 74. Signaling—a field in which the Milwaukee has many pioneer achievements to its credit—is covered on pages 72 and 73. And the road's engineering history—of special interest because it crosses so many big rivers and mountain ranges, and is so largely electrified—is viewed, chiefly through the biographies of its six chief engineers—in the concluding article, which starts on page 76.

IN THE NEWS SPOTLIGHT: Rutland, in receivership since 1938, completes reorganization, with W. E. Navin, trustee of former company, elected president of new Rutland Railway Corporation.—Alfred E. Greco, of Pullman Company, elected president of American Railway Magazine Editors Association at group's 28th annual meeting in Boston.—Railroads and Post Office Department submit mail-pay agreement to I.C.C.—Contracts signed in 40-hr. case of yardmasters' union.—I.C.C. orders new rules for reporting employment and wages.—A.A.R. member roads to meet in New York November 17.—Emergency board recommends 10-cent hourly increase for Railway Express drivers in New York, plus some "welfare" benefits, but rejects working-rule changes.—Frisco opens new yard and shops at Springfield, Mo.—Railway track contractors form new association.—Railway Business Women's Association to celebrate silver anniversary.

THE ONE EXCEPTION: This issue's only feature article not devoted chiefly to the C. M. St. P. & P. centennial is the report, beginning on page 79, of the recent Chicago convention of the American Association of Passenger Traffic Officers. Even that, it so happens, has a strong Milwaukee tinge, because one of the features of the meeting was a report by that road's P.T.M. on the new, simplified, book-type interline ticket being tried out by the Milwaukee for itself and other railroads. (His report, incidentally, is highly favorable to the new form.) Other speakers whose remarks are also summarized were S.A.L. President L. R. Powell; Ian Warren of the C.P.; Pullman's G. A. Kelly; the editor of this paper; and representatives of the Department of Defense and of the developers of the Intelex space reservation system.

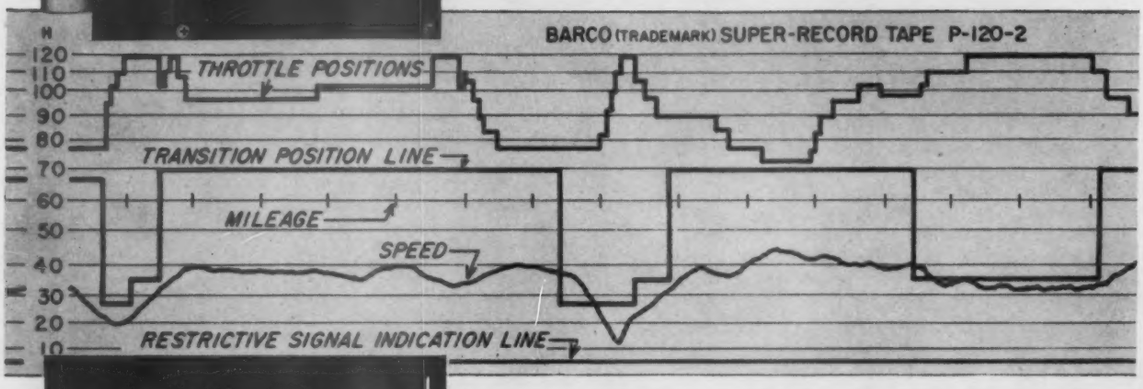
CANADIAN ORE LINE: As reported in the Construction News columns, a group of Canadian construction companies has been awarded a contract to build a 360-mi. railroad from tidewater at Seven Islands, Que., to the newly-explored Quebec-Labrador iron ore fields, in which this country is also interested. The line is scheduled for completion in 1954.

SHORTER HOURS FOR PULLMAN CONDUCTORS? Pullman Company costs would be increased by some $431,000 a year if the recommendation of an emergency board, to reduce Pullman conductor monthly working hours from 225 to 210, without change in pay, is adopted. The board, at the same time, recommended withdrawal of most of the other 60-odd issues in the controversy. The board's report is summarized in the News pages.

FAST PACE: Railroad equipment buying during the week just ended continued to maintain the dizzy pace it has been setting for many weeks now. Domestic orders reported in this issue's News columns include 80 Diesel-electric locomotive units, three passenger cars and 5,850 freight cars, with another 4,575 freight cars ordered by the Canadian Pacific. Budd also booked an order from the Consolidated of Cuba for 12 RDC's—the largest single commitment to date for the new self-propelled units. Incidental results of this active equipment buying are the reopening by Pressed Steel of its Mt. Vernon, Ill., plant, and the dusting off of "help wanted" signs by railroads, many of which are looking for more men to expedite their car building and repair programs.

ACCURACY, DEPENDABILITY

PROVED BY MILLIONS OF MILES OF SERVICE!



Helps You
GET THE MOST OUT OF YOUR DIESELS —OLD OR NEW!

BARCO RECORDERS

For Diesel and Steam Passenger, Freight, and Switch Engines

The accuracy and dependability of BARCO RECORDERS are unquestioned. A typical user* reports accuracy within 2% at 100 MPH after a million miles of service! This is the kind of performance you want and one reason why you should INSIST ON GETTING BARCO RECORDERS.

There are other equally important reasons. BARCO gives you the dependable, accurate records you need to insure efficient, profitable, safe operation of your equipment. When you consider the investment required for a locomotive, it does not pay to economize on the instrument that HELPS YOU GET THE MOST OUT OF YOUR INVESTMENT! *Let Barco give you the facts—ask for information.* BARCO MANUFACTURING CO., 1800 L Winnemac Ave., Chicago 40, Illinois.

* Name on request.

Specify
BARCO

SALUTING- CHICAGO MILWAUKEE ST. PAUL AND PACIFIC *1850-1950*

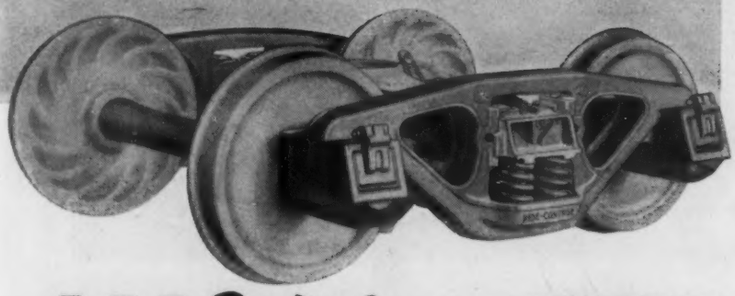
THE LINE IS COMPLETE

FREE ENTERPRISE — THE CORNERSTONE OF AMERICAN PROSPERITY

NO SPRING F-L-E-X

NO SPRING "SET"

Friction Springs aren't expected to carry Car Weight in the Smooth-Riding Ride-Control Truck



A-S-F *Ride-Control*® TRUCK

CONSTANT FRICTION CONTROL
LONG SPRING TRAVEL

Constant, uniform friction control requires constant, *uniform* pressure. And you get it in A.S.F. Ride-Control Trucks! Friction springs *aren't flexed at all* by up-and-down bolster movement.

These springs don't fatigue or take a permanent "set," because their length remains virtually *fixed*. And, with but a single job to do, they do it *exceedingly* well.

Supporting car weight and controlling spring movement are *independent* functions. That's why the A.S.F. Ride-Control Truck has *separate springs* for each of these purposes.

AMERICAN STEEL FOUNDRIES

MINT MARK OF ⬡ FINE CAST STEEL

WHEREVER YOU USE WOOD..

IN FRESH WATER, many preservatives leach out of wood. BARRETT* Coal-Tar Creosote resists this leaching action. Being only negligibly soluble in water, it is the preferred preservative for use on submerged wood structures, or those exposed to the powerful action of rapidly flowing water.

IN THE NORTH, poles must resist the tremendous weight of frequent sleet storms. Avoid preservatives which *weaken* the wood. BARRETT Coal-Tar Creosote allows poles to retain their maximum strength, and helps to keep the poles at their best and hold the lines aloft.

IN THE SOUTH, prolonged high temperatures cause light-bodied preservatives to leach and evaporate from the wood, thus exposing the wood to termite attack and decay. BARRETT Coal-Tar Creosote, heavier bodied and of lower volatility, prevents this condition. It stays in the wood longer under all conditions—doesn't "run out" on the job.

IN THE DESERT, crossties broom, shatter and split from extreme dryness and heat. Solutions made with BARRETT Coal-Tar Creosote retard this, and also reduce mechanical wear of crossties through their lubricating action on the wood fibers. In poles, heavy treatment with BARRETT Coal-Tar Creosote substantially reduces checking and splitting.

IN THE SWAMPS, forces of decay are almost at their maximum of destructive power. High moisture content and infection from other decaying wood and debris are ever-present menaces. Poles properly treated with Coal-Tar Creosote have survived under swamp conditions for years.

IN SALT WATER, marine wood-borers give a preservative its severest test. Of hundreds of preservatives that have been tried through the years, *Coal-Tar* Creosote is the only one that has proved consistently effective against teredos, limnoria and other salt-water enemies of wood.

THE BARRETT DIVISION
ALLIED CHEMICAL & DYE CORPORATION
40 Rector Street, New York 6, N. Y.

Use Barrett* → COAL TAR CREOSOTE

*Reg. U. S. Pat. Off.

Only coal-tar creosote wood preservative has been used long enough and widely enough to have proved its effectiveness under all conditions.

Where chilled car wheels are on the spot

Above—AMCCW chilled car wheels are bored faster, more easily, with less wear on cutting tools, than any other type of car wheel—a saving in time, temper, and equipment. A micrometer is used to measure the bore to the last thousandth of an inch.

Left—The AMCCW wheels are pressed on the axle, one at a time, usually under 50 to 60 tons pressure. Then the pressman measures at least three points around the mounted wheels to check for accuracy of gage, alignment, and direction of bore.

On the spot is right! Wheel Shop men can tell you quicker than anybody else how AMCCW chilled car wheels are easier to bore, with greater speeds and feeds . . . how they save time and expensive equipment . . . how they mount with a firm grip under 50 to 60 tons pressure.

Chilled car wheels are not only easier to mount, they make better safety records because iron *likes* to cling to steel. That's why AMCCW wheels are the most popular ones in the Wheel Shop, where they're really on the spot.

AMCCW

Low first cost
Low exchange rates
Reduced inventory
Short haul delivery
Increased ton mileage
High safety standards
Complete AMCCW inspection
Easier shop handling

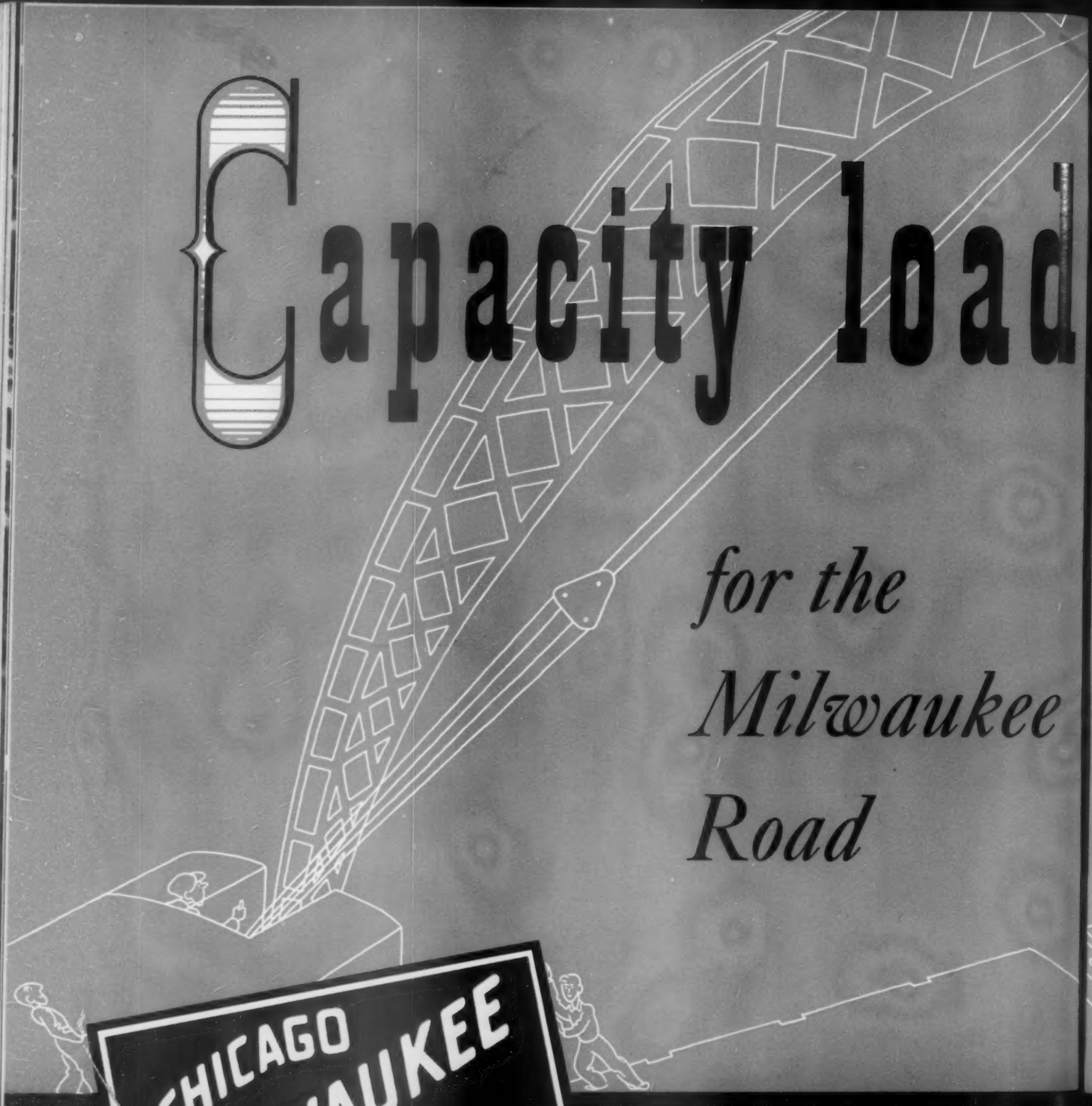
ASSOCIATION OF MANUFACTURERS OF CHILLED CAR WHEELS

445 North Sacramento Boulevard, Chicago 12, Ill.

American Car & Foundry Co. • Southern Wheel (American Brake Shoe Co.)
Griffin Wheel Co. • Marshall Car Wheel & Foundry Co. • New York Car Wheel Co.
Pullman-Standard Car Mfg. Co.

Capacity load

for the Milwaukee Road

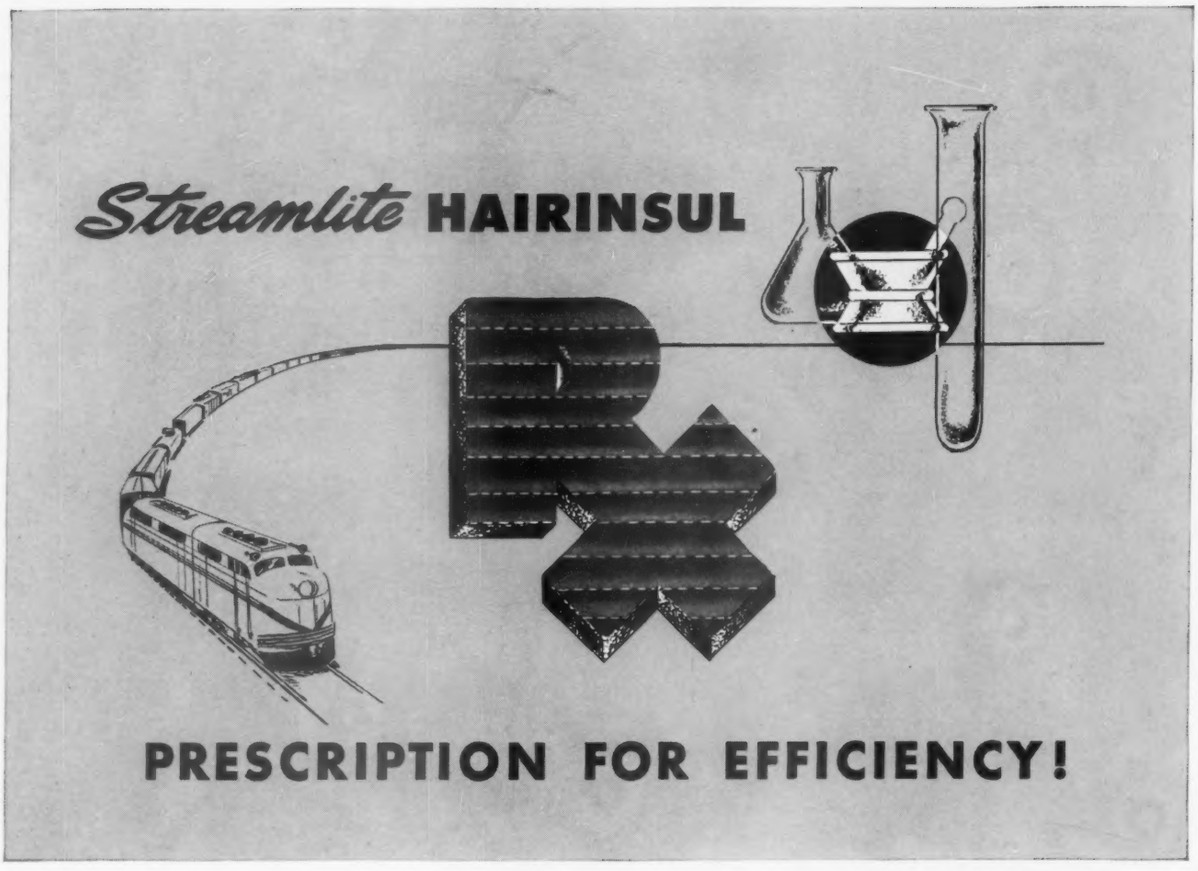


100 Years of Service 1850-1950

THE ROUTE OF THE HIAWATHAS

d of Good Wishes

A century of progress and service has built a proud record for the Milwaukee Road. Operating the third largest trackage system in the country is a big job. May the next hundred years bring continued fruitful returns!
American Car and Foundry Company, New York.



There's no better prescription for efficient refrigerator car insulation than Streamlite HAIRINSUL.

Leading refrigerator car builders have been specifying all-hair insulation for nearly half a century — and they find today that Streamlite HAIRINSUL, with its 40% less weight, is the most efficient and economical.

Streamlite HAIRINSUL assures you all the advantages given at the right — and more besides. Write for complete data.

LOW CONDUCTIVITY. Thoroughly washed and sterilized, all-hair heat barrier. Rated conductivity — .25 btu per square foot, per hour, per degree F., per inch thick.

LIGHT WEIGHT. Advanced processing methods reduce weight of STREAMLITE HAIRINSUL by 40%.

PERMANENT. Does not disintegrate when wet, resists absorption. Will not shake down, is fire-resistant and odorless.

EASY TO INSTALL. Blankets may be applied to car wall in one piece, from sill to plate and from one side door to the other. Self-supporting in wall sections between fasteners.

COMPLETE RANGE. STREAMLITE HAIRINSUL is available ½" to 4" thick, up to 127" wide. Stitched on 5" or 10" centers between two layers of reinforced asphalt laminated paper. Other weights and facings are available.

HIGH SALVAGE VALUE. The all-hair content does not deteriorate with age; therefore has high salvage value. No other type of insulation offers a comparable saving.

Dept. H5011, Merchandise Mart, Chicago 54, Ill.

OUR HEARTY *Congratulations*

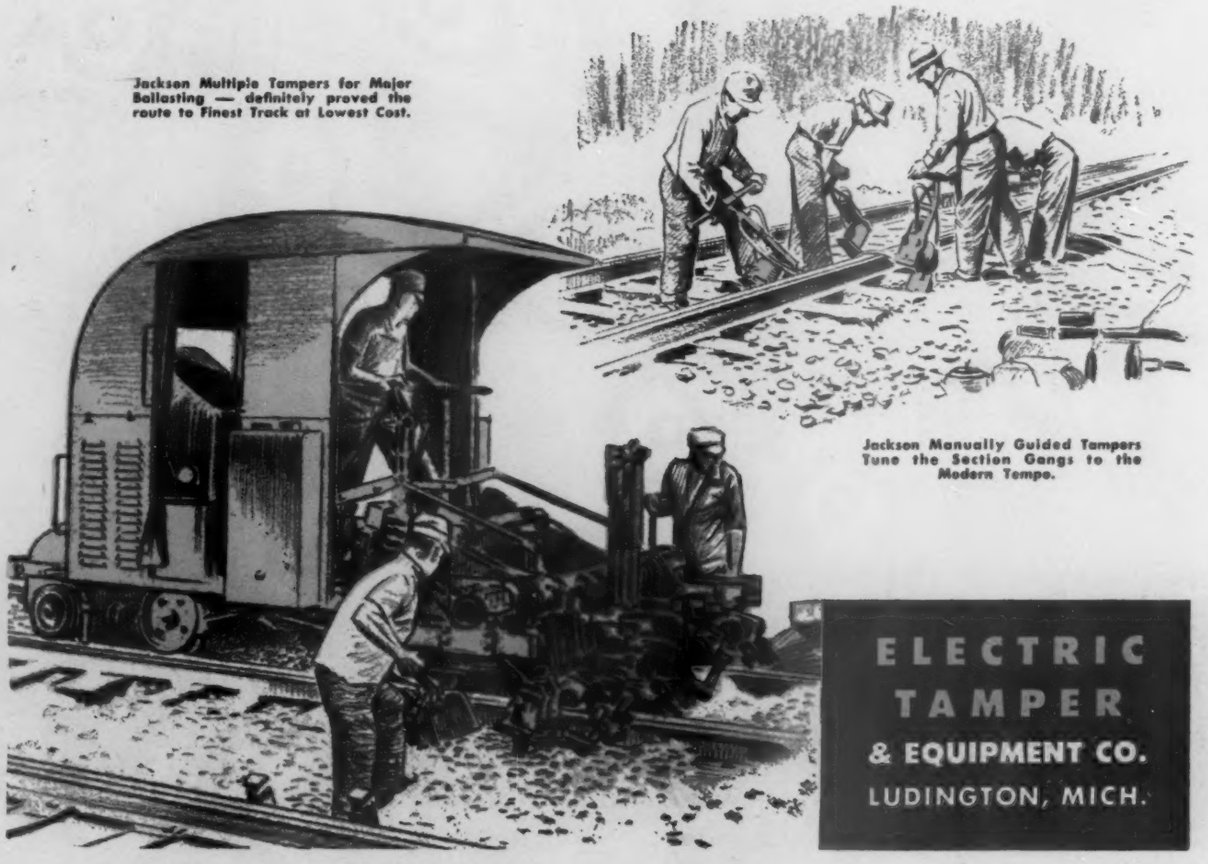
CHICAGO MILWAUKEE ST. PAUL AND PACIFIC

"THAT RAPIDLY VANISHING AMERICAN"

. . . for passing the hundredth marker in a full century of progress that has built a truly great railway system.

We take justifiable pride in the important role JACKSON Tie Tampers — both unit and multiple types — have played in building and maintaining your roadbed to meet the constantly increasing tempo of traffic requirements.

Jackson Multiple Tampers for Major Ballasting — definitely proved the route to Finest Track at Lowest Cost.



Jackson Manually Guided Tampers Tune the Section Gangs to the Modern Tempo.

ELECTRIC TAMPER & EQUIPMENT CO.
LUDINGTON, MICH.

Hats Off to

Today... after four generations of pioneering and growth through a golden century of development... a great fleet of Diesels is highballing through the Midwest and Northwest over some 11,000 miles of railroad, hauling long freights and the sleek Hiawathas of the Milwaukee Road.

Operating in a part of America that is still young with high promise for the years just ahead, the Milwaukee Road is looking forward to its second century with great expectations. May the second be even better than the first!

Playing an important part in the Milwaukee's fine record is the vital factor of lubrication. Sinclair Gascon Oil is used to lubricate many of the giant Diesels in this great fleet. It has an outstanding record for dependable performance.

In a Diesel, only the best will do

To get the utmost from costly Diesels operating at high speeds over long distances, America's top railroads and locomotive manufacturers agree that Sinclair Gascon Oils are unsurpassed. Today more than 60 U.S. railroads use these fine lubricants.

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No Tools Needed!

With The

ALL NEW

MOTOR WHEEL JOURNAL BOX LID

1. Both ends of hinge-pin supported by full ¾" lid bearing. Eliminates worn holes in lid and scoring of hinge-pin.
2. Stops formed in ends of lid bearing holds straight hinge-pin in position under spring pressure. NO FASTENING OR HAMMERING NEEDED TO INSERT OR SECURE HINGE-PIN.
3. Keeper-pin holds assembly under pressure during shipment and storage. When hinge-pin has been inserted, hand pressure on lid PERMITS EASY REMOVAL OF KEEPER-PIN WITHOUT TOOLS.
4. Coil spring and roller assembly held snugly by two sheared ears. Roller operates freely over journal box lug preventing wear of lug — lets lid open and close easily.
5. Center construction permits full articulation up, down, right or left, insuring a tight fit. A series of press fits and shear riveting makes articulation point oil tight.
6. Full pressed-steel construction. Housing made of 3/16" steel and cover of 5/32" steel.
7. Opens 120° for easy access to journal.
8. Extended housing arm eliminates all opening and closing strain from articulating point.

Certified by A.A.R.
to specification M-120-47

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DEEP FLANGE MODELS

Provide added protection from wind currents carrying foreign matter and moisture so harmful to efficient lubrication.

Full speed ahead!

The Milwaukee Road is celebrating its 100th birthday. The past century has meant great progress for all of us.

And the years ahead will mean even greater advances.

Today, The Milwaukee Road is ready to meet every need of its growing territory.

Naturally, we're proud of our growth during the past 100 years to a system of 11,000 miles in 12 states.

But we're even happier about the fact that we're in the best position in our history to serve our friends all over the nation.

OPENING OUR SECOND CENTURY
1950

THE MILWAUKEE ROAD

The friendly Railroad of the friendly West

CHICAGO MILWAUKEE ST. PAUL AND PACIFIC

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REG. U.S. PAT. OFF.

FIRST NAME
IN RAILROAD RADIO

Bendix Radio Assures Time-Saving Teamwork Possible in No Other Way!

Case history after case history proves it, minutes and even hours are regularly clipped from routine railroading operations with Bendix Railroad Radio assuring *instantaneous* contact, closer teamwork, between yard, train and wayside personnel. Furthermore, it is *easy* for any railroad, large or small, to take advantage of this added efficiency . . . the cost of Bendix Radio equipment is amazingly low, installation is simplicity itself. And remember, Bendix Radio communication makes a powerful selling point with speed-conscious shippers, too. So, write for details. Do it today, because we feel sure that when you get the facts you'll get Bendix Railroad Radio.

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Congratulations to the Milwaukee Road on its 100th Anniversary

Freight Travels Faster with Bendix Radio

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A railroad car...

is a  HOME on WHEELS

It is interesting to note that the Railroad practice of zoning

passenger cars has influenced the current recommendations of temperature controls in  modern homes.

Vapor Heating Corporation is proud to have been the leader in this thought that individual passenger comfort can best be provided by zoning. Zoning insures comfortable temperatures to all passengers traveling in cars subjected to the rapidly changing conditions of railroad operation.

Vapor RADOR MODULATES TEMPERATURES ALWAYS AT THE CONTROL POINT

VAPOR HEATING Corporation

80 East Jackson Blvd., Chicago 4, Illinois

New York • St. Paul • Denver • St. Louis • Cleveland • Washington • Philadelphia
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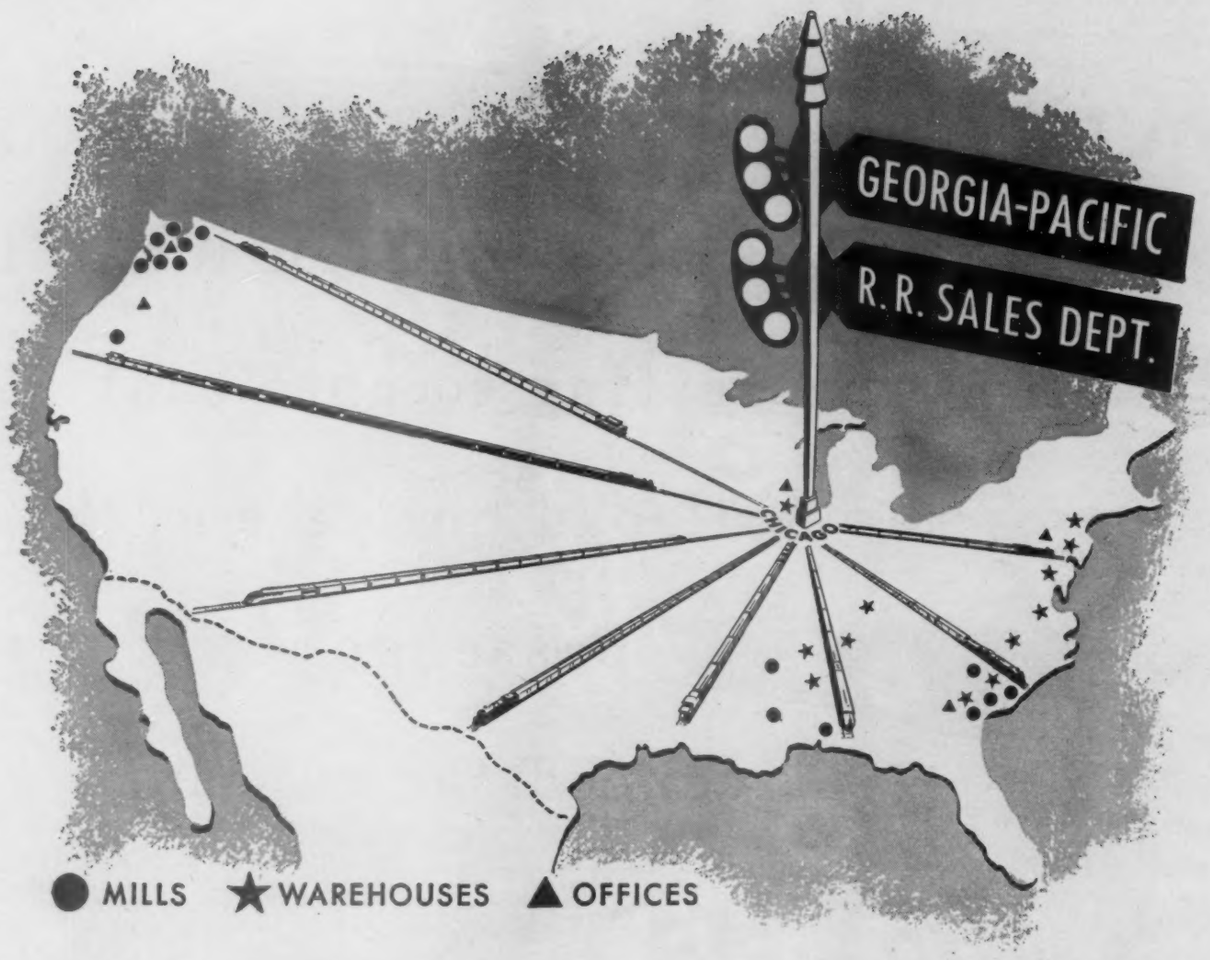

At the HUB of America's Railroad System

Georgia-Pacific, with its Railroad Sales Headquarters located at the hub of the railroad system, is ready to share with the railroads whatever problems lie ahead . . . *ready to supply all your plywood and lumber needs.*

Whether you need a plywood with the amazing versatility of GPX for your car interiors, or cross ties for your right-of-way, Georgia-Pacific can meet your specialized railroad needs. Consult the check list below. And remember, the phone at your elbow can bring you information and price quotations quickly and conveniently.

Call HArrison 7-5466, in Chicago

GEORGIA—PACIFIC

PLYWOOD & LUMBER CO.

Railroad Sales Department • **332 South Michigan Ave., Chicago, 4, Ill.**

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We specialize in the following RAILROAD MATERIALS

Dense Decking—2", 2½", 2¾" & 3", A.A.R. Par. 57 & 58
Lining—1 x 4 & 1 x 6—10' to 18' A.A.R. Par. 59 & 60
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Shipments in strict accordance with specifications of Association of American Railroads. Mill or destination inspection, grade and count guaranteed.

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Treated lumber and timbers • Cross ties and switch ties • Fir and Hardwood doors • Hardwood plywood and veneers • Douglas Fir Plywood • Poles and pilings • Douglas Fir lumber and timbers • Western and Southern Mouldings • Giant-sized Scarfed panels • Southern Pine car lumber • Gum and Oak crossing plank

ONE OF AMERICA'S LARGEST PRODUCERS OF PLYWOOD AND LUMBER

Specify penta- chlorophenol

THE CLEAN WOOD PRESERVATIVE

It will pay you to treat your decking with PENTAchlorophenol—the clean wood preservative.

"PENTA" gives effective protection against decay. Moreover, its low solubility under severest moisture conditions assures protection that lasts through the years.

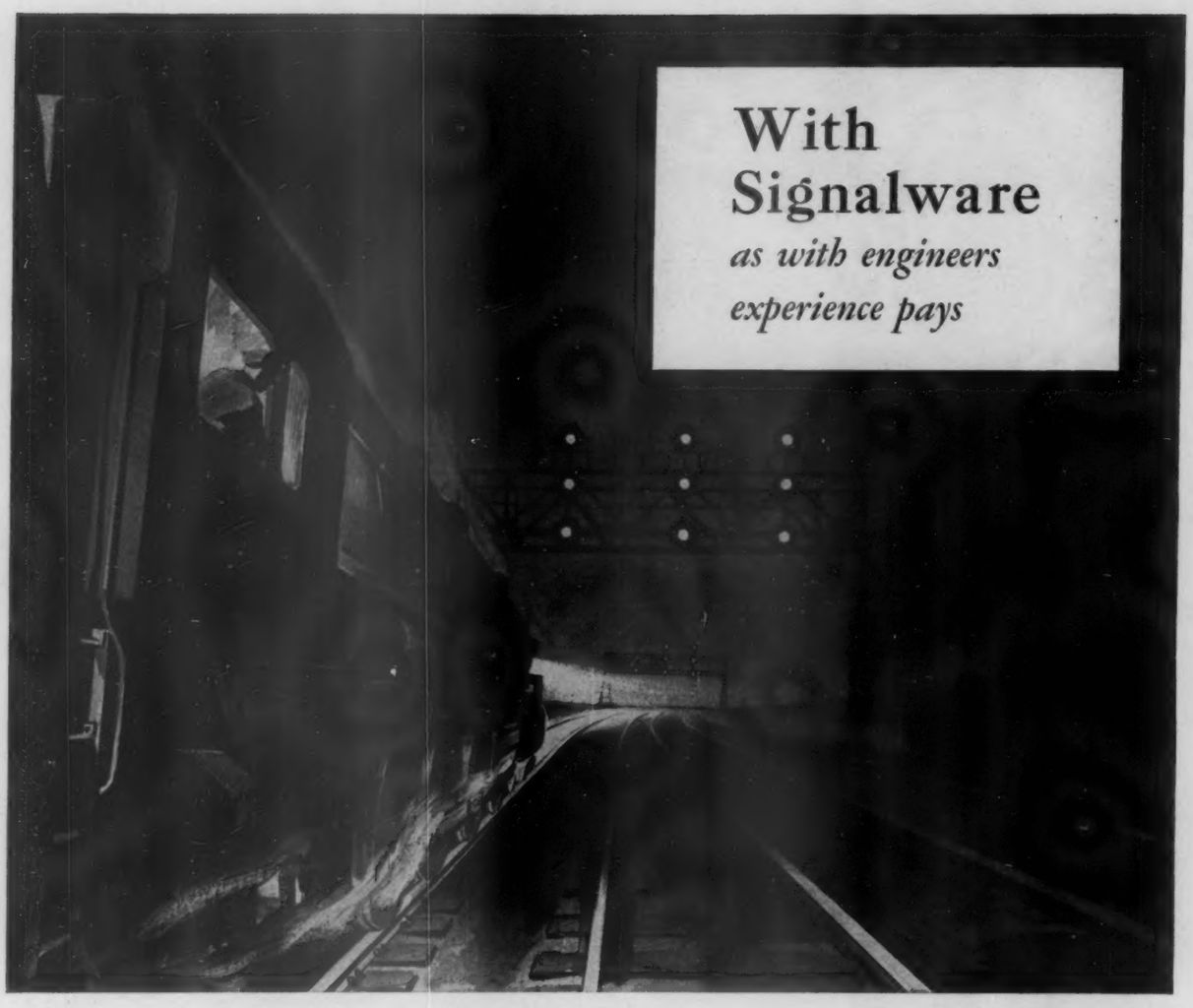
Specify the "clean" treatment for your decking and car lumber, as well as your ties, poles and wood platforms. For further information about PENTA write Dow, Dept. PE-34B.

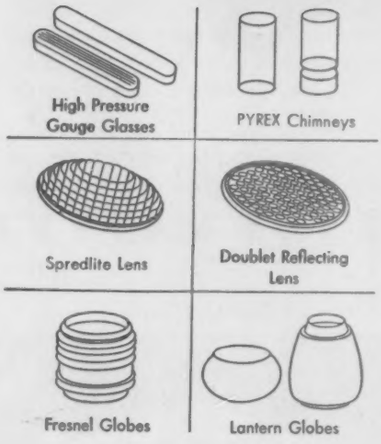
HOW "PENTA" PROTECTS TIES!

Newly adzed tie surfaces are protected by brushing or machine spraying with PENTAchlorophenol solution. This is easily done with PENTA, even in coldest weather.

THE DOW CHEMICAL COMPANY • MIDLAND, MICHIGAN

DOW
penta- chlorophenol





With an engineer, experience pays in many ways . . . in safety, efficiency, dependability and economical operation of equipment. With signal glassware, the same is true. That is why it pays to rely on Corning.

Corning offers you the cumulative benefits of seventy-three years of experience in the manufacture and design of signalware—experience supplemented by 99 years of manufacture in all fields of optical, illuminating and technical glassware. This combination of experience and research gives you signalware that pays off in maximum safety.

By specifying Corning products, you get the signalware that established the A.A.R. standards—the best signalware available at any time. All manufacturers of lamps, lanterns and signals supply Corning Railroad Ware.

Safety depends on signal glassware—Railroads can depend on Corning

CORNING GLASS WORKS **CORNING, N. Y.**

PYREX T.M. REG. U.S. PAT. OFF.

Corning means research in Glass

Technical Products Division: **Signalware, Laboratory Glassware, Glass Pipe, Gauge Glasses, Lightingware, Optical Glass, Glass Components**

NOW "STUBBY" a shorter *WORKSAVER*

it's a YALE *WORKSAVER* electric truck

FOR NARROW AISLES

FOR FREIGHT CARS

FOR HIGHWAY TRUCKS

STUBBY OUTSIDE STURDY INSIDE!

Squeezing through narrow congested areas is a cinch for "Stubby." Here's why: "Stubby" is 6 inches shorter than other Worksaver models. But it's cut down in length only . . . all the efficient qualities standard in Yale Worksavers are part of "Stubby," too! "Stubby" Worksavers can be had in pallet or platform lengths to suit your exact needs . . . in 4,000 and 6,000 lb. capacities.

Only "Stubby" Worksavers have *all* these advantages:

1. Operational Controls On The Handle. Dual controls . . . right or left-hand operation for two forward and reverse speed travel. Push buttons for elevating and lowering . . . dual control warning signal.

2. Power-packed Drive Unit has improved motor efficiency.

3. "Dual-Lift" Mechanism . . . new . . . better. Combines 2 hydraulic lifting cylinders with articulating connection to lifting linkage.

4. Easy Steer . . . widely separated tapered roller load bearing and 16" diameter, ball bearing steering ring with built-in, self-aligning features. Greater than right angle turning in either direction.

5. Positive Acting Safety Brake effective instantly with handle in either upright or horizontal position.

6. Dual Trailing Wheels in each fork of pallet truck provides wide floor contact . . . easier turning . . . greater floor protection.

7. Large Diameter Drive Wheel has more rubber . . . cleated treads for better traction and longer wear.

8. Double Battery Protection . . . batteries assembled in steel case . . . fit in Worksaver's totally enclosed heavy steel battery compartment.

9. No Flexing Of Electrical Wires . . . they're fed into handle controls from commutator at fulcrum point. Eliminates breakage, maintenance . . . reduces fire hazard.

10. Spark Enclosed Features available on pallet and platform type "Stubby" Worksavers.

"Stubby's" 6 inch shorter length comes in handy in tight spots.

DETACH AND MAIL COUPON NOW!

The Yale & Towne Manufacturing Company
Department M-36
Roosevelt Boulevard and Haldeman Avenue,
Philadelphia 15, Pa.

Please send me:

☐ Pallet Type "Stubby" Bulletin—P-1207

☐ Platform Type "Stubby" Bulletin—P-1206

☐ The name of the nearby Yale representative

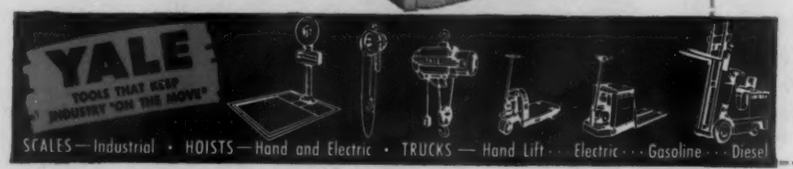
Name.....

Company.....

Address.....

City and Zone.....State.....

M-19



LOOKING AHEAD with P&H PRODUCTS —for Better Railroad Service

P&H salutes The Milwaukee Road as it opens its second century of operation.

It has been our privilege to serve this, and many other progressive American railroads, in many ways.

In shops all over the country you see the familiar P&H emblem. In the swift handling of heavy loads . . . and in the fabrication and repair of rolling stock . . . . P&H equipment is contributing to greater efficiency and lower costs.

Along the right of way and around yards, P&H equipment is speeding up construction and handling bulk materials—in hundreds of locations.

In warehouses and terminals, P&H materials handling equipment is taking over more and more important tasks, saving time—and money—in faster handling of shipments.

USE THIS SPECIAL RAILROAD SALES DIVISION

Through close cooperation with American railroads, P&H is familiar with the modern trends in railroad operations. P&H's specialized Railroad Sales Division is ready to look ahead with you—to give you the benefit of its broad experience—to help railroads deliver the most effective service to the public.

P&H

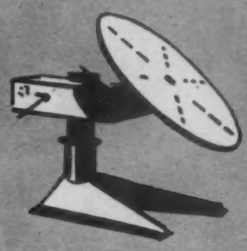
RAILROAD SALES DIVISION
4429 West National Ave.,
Milwaukee 14, Wisconsin

HARNISCHFEGER CORPORATION
MILWAUKEE 14, WISCONSIN, U. S. A.

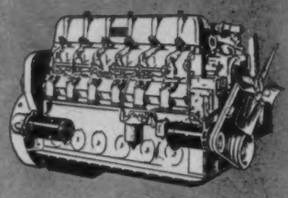
EXCAVATORS • OVERHEAD CRANES • HOISTS
ARC WELDERS AND ELECTRODES • SOIL STABILIZERS
CRAWLER AND TRUCK CRANES • DIESEL ENGINES
CANE LOADERS • PRE-ASSEMBLED HOMES

P&H AC and DC Arc Welders

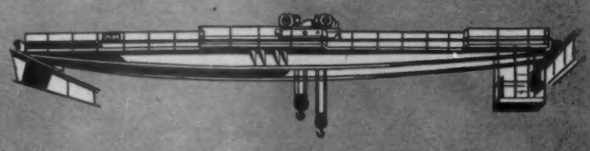
P&H Welding Electrodes



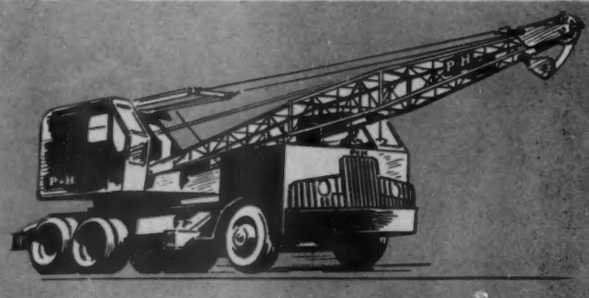
P&H Welding Positioners



P&H Diesel Engines

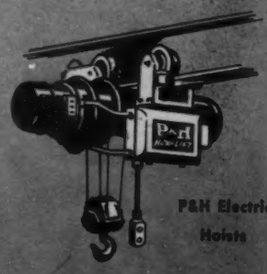


P&H Railroad Shop Cranes



P&H Truck Cranes for Materials Handling

P&H Excavators



P&H Electric Hoists

CHICAGO MILWAUKEE ST. PAUL AND PACIFIC

THE MILWAUKEE ROAD

Route of the Hiawathas

3000 HOPPER CARS

Equipped with ENTERPRISE UNIT DOOR LATCHES

50-ton hopper car equipped with Enterprise Unit Door Latches

THE ADVANTAGES OF *ENTERPRISE* UNIT DOOR LATCHES

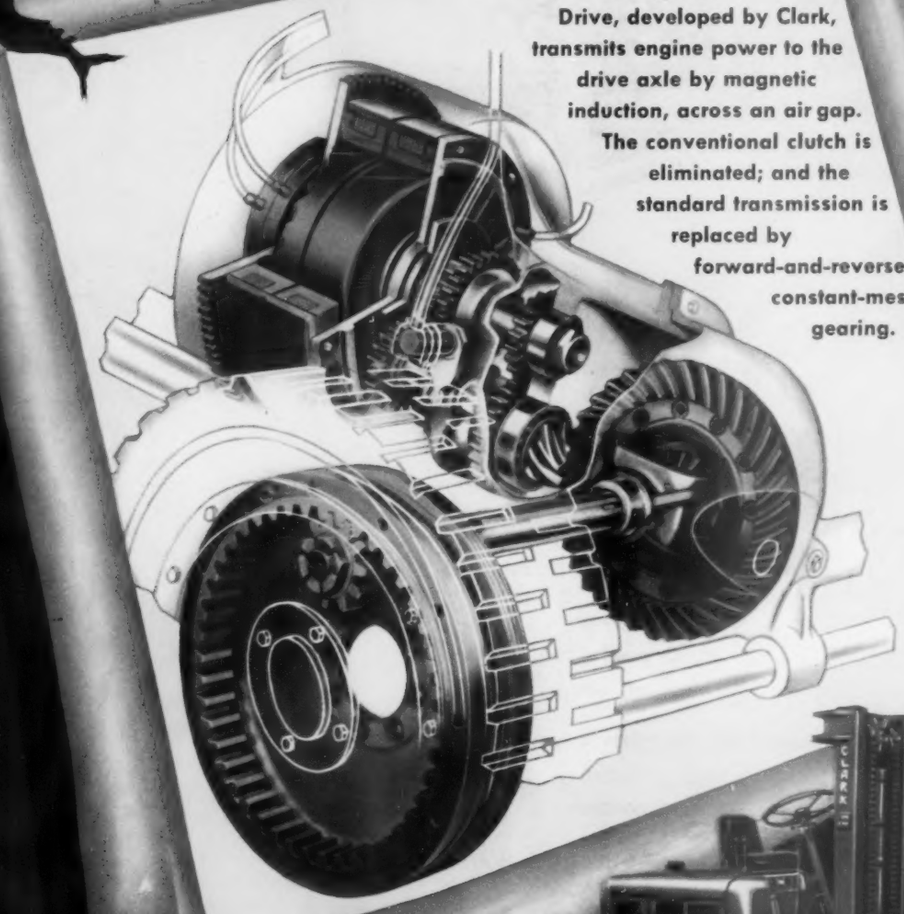
Rugged Construction—Will Last Life of Car.
No Connecting Door Brace Required.
Save Weight and Reduce Car Parts.
Tight Door Closure for Finest of Ladings
Prevents Loss from Spill.

ENTERPRISE RAILWAY EQUIPMENT COMPANY

59 East Van Buren Street • Chicago 5, Illinois

CLARK Dynatork Drive

ON GAS POWERED CLARK FORK TRUCKS



The Dynatork Drive, developed by Clark, transmits engine power to the drive axle by magnetic induction, across an air gap. The conventional clutch is eliminated; and the standard transmission is replaced by forward-and-reverse constant-mesh gearing.

Available on UTILITRUCS 6000, 7000, 10,000 lbs.
CARLOADERS 3000, 4000, 5000 lbs.
and YARDLIFTS, 4000, 6000 lbs.

TURN PAGE FOR MORE DYNATORK DETAILS

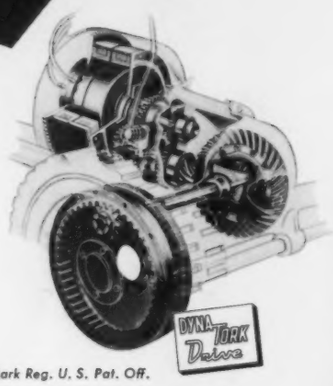
CLARK EQUIPMENT COMPANY, INDUSTRIAL TRUCK DIVISION
BATTLE CREEK, MICHIGAN

DYNATORK DRIVE *Makes a Better* CLARK CARLOADER!

FASTER! *from forward to reverse* IT DOES MORE WORK!

EASIER! *to operate than your car* IT DOES MORE WORK!

BETTER! *neutral tests prove* IT DOES MORE WORK!



*Trade Mark Reg. U. S. Pat. Off.

Here's a combination destined to make Materials Handling history—

The husky and versatile gas-powered Carloader fork-lift truck of 3,000-, 4,000- and 5,000-lbs.-capacities has done more than any other one model to establish Mechanized Materials Handling as essential to modern high-speed, low-cost production.

The revolutionary Dynatork Drive cuts deeply into handling costs *by increasing as much as 20 per cent the amount of work a fork truck can do.* It transmits engine power to the drive wheels by magnetic induction, through an air gap—no clutch, no conventional transmission. It's unique because it does not have to be brought to a stop before reversing.

This combination of CARLOADER* and DYNATORK* DRIVE constitutes a forward step of enormous significance to the science of Materials Handling. You'll want to know all about it. A Clark bulletin will bring you the facts in convenient form. Write for it.

CLARK ELECTRIC AND GAS POWERED **FORK TRUCKS**
AND INDUSTRIAL TOWING TRACTORS

INDUSTRIAL TRUCK DIVISION • CLARK EQUIPMENT COMPANY • BATTLE CREEK 66, MICH.

Please send: ☐ Literature on Carloader with Dynatork Drive
☐ Movie Digest ☐ Material Handling News

Name_____

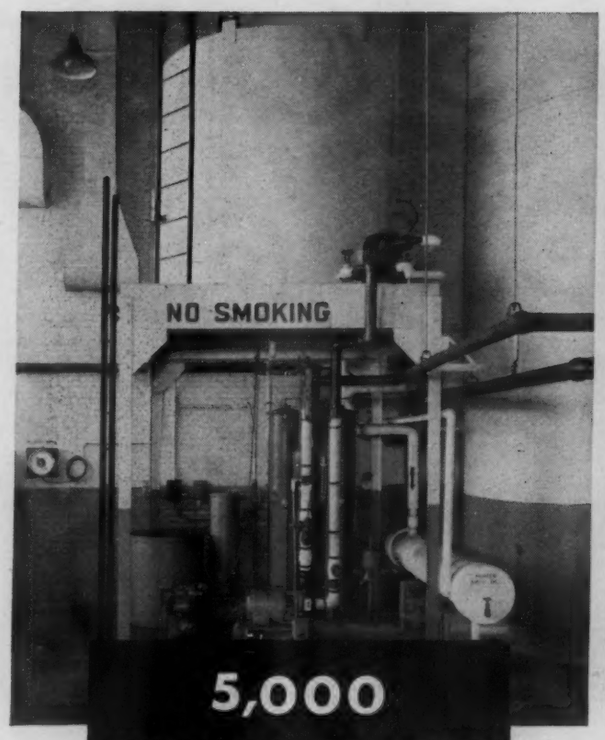
Firm Name_____

Street_____

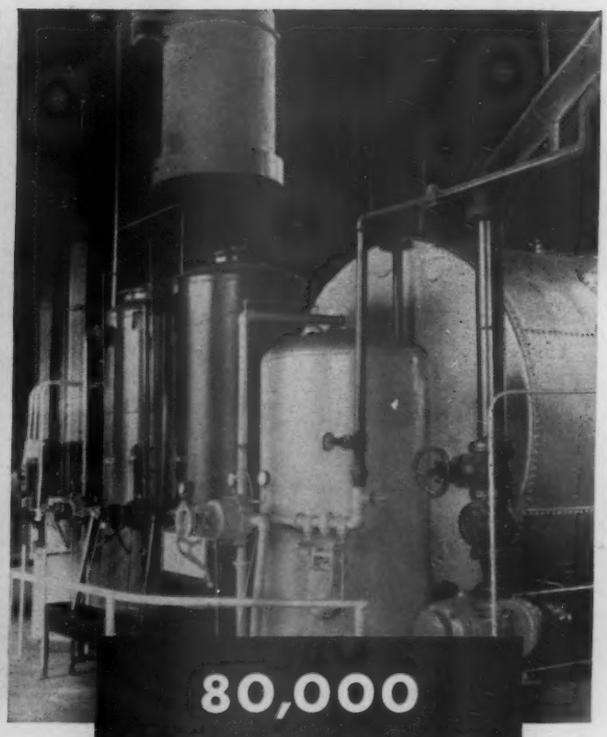
City_____ Zone____ State_____

AUTHORIZED CLARK INDUSTRIAL TRUCK PARTS AND SERVICE STATIONS IN STRATEGIC LOCATIONS

PRODUCTS OF CLARK—TRANSMISSIONS · FORK TRUCKS & TRACTORS · AXLE HOUSINGS · GEARS AND FORGINGS · RAILWAY CAR TRUCKS · ELECTRIC STEEL CASTINGS · AXLES · TRACTOR UNITS



5,000 GALLONS PER DAY



80,000 GALLONS PER DAY

A DEARBORN DE-IONIZING SYSTEM...

TO PROVIDE THE AMOUNT OF MINERAL-FREE WATER YOU NEED

A Dearborn De-Ionizing system will provide the mineral-free water you need at less than 10 percent the cost of distilled water.

This mineral-free water, when conditioned with Dearborn formula 517, will provide proper Diesel cooling . . . eliminate mechanical failure of liners, heads and blocks caused by corrosion, scale and sludge deposits. This combination will protect cooling systems of engine-driven auxiliary generators and radiators of trucks, buses, scrapers, graders, caterpillars. Dearborn De-Ionizing systems will also produce mineral-free water for storage batteries and adequate supplies of scale-free, non-corrosive water for Diesel steam generators.

A Dearborn engineer will discuss a De-Ionizing system to meet the requirements of your operation. The only information required is: (1) Analysis (or sample) of raw water; (2) quantity and quality of mineral-free water required; (3) available space for equipment; (4) raw water pressure and size of supply line; (5) available power characteristics.

HAVE YOU REQUISITIONED YOUR DEARBORN CHROMOKIT?

It provides a fast, simple, accurate and economical way to determine the chromate content of your Diesel cooling water. Only $7.50 each.

INFORMATION ON DE-IONIZING SYSTEMS

A copy of "Dearborn De-Ionizing Systems," containing valuable information about how to secure the mineral-free water you need, will be sent upon request.

DEARBORN CHEMICAL COMPANY
310 S. Michigan Ave. • Chicago 4, Ill.

Dearborn
TRADE MARK REGISTERED
THE LEADER IN WATER TREATMENT AND RUST PREVENTIVES

Dearborn Chemical Company
Dept. RA, 310 S. Michigan Ave.,
Chicago 4, Ill.

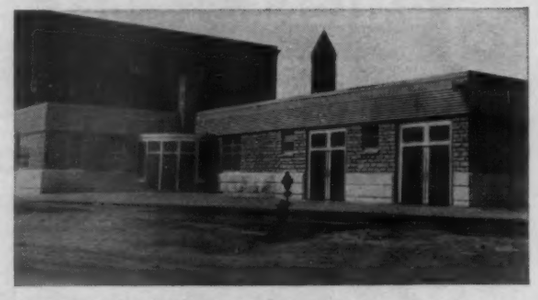
( ) Please send booklet "Dearborn De-Ionizing Systems"
( ) Have a Dearborn Engineer call.

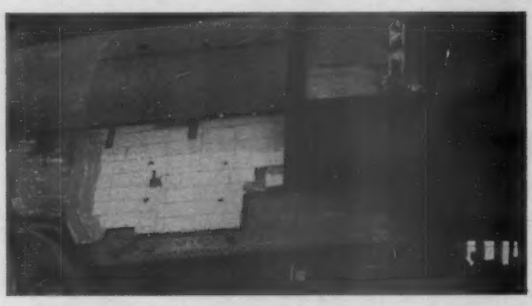
Name.....
Railroad.....
Address.....
City.....*Zone*....*State*.....

Congratulations to the Milwaukee on its one hundredth birthday! During most of those hundred years, Johns-Manville products have served the Milwaukee in many ways . . . helped make the going easier by contributing important economies in the operation and maintenance of equipment. Some typical examples of how they have done this are shown below.

BY REDUCING MAINTENANCE . . . ▶

Durable, fireproof J-M Building Materials help the Milwaukee keep building maintenance costs low, add to attractiveness of stations, indoors and out. In the Sioux Falls, S. D., station (right), for example, J-M asbestos-cement Transite sheets, utilized as trim from windows to eaves, add a modern touch to the exterior. A J-M Built-Up Roof and J-M Rock Wool Insulation help keep the interior snug and warm.





◀ BY SAVING HEAT AND POWER . . .

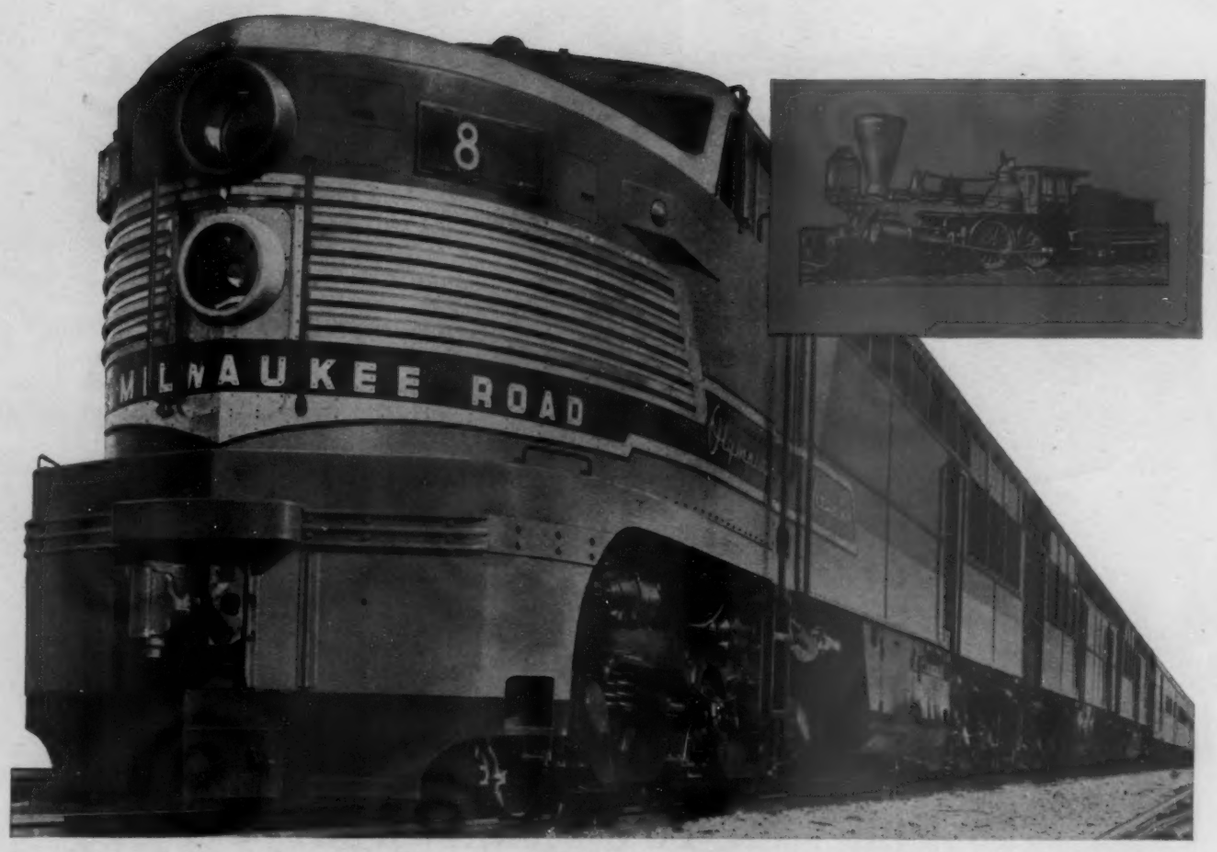
Like most other leading railroads, the Milwaukee uses J-M Insulations to conserve heat and power, reduce operating costs. One of these is J-M 85% Magnesia, shown at left being applied as boiler lagging to a steam locomotive. Other efficient J-M Insulations used by the Milwaukee include Thermo-Wrap and Thermo-Tape, two newly developed products for covering steam and hot water pipes on locomotives and cars.

BY INCREASING PASSENGER COMFORT . . . ▶

One reason passengers ride so comfortably on the Milwaukee is because of Stonefelt, the specially designed J-M blanket-type insulation for modern passenger cars. Installed in the car walls as shown at right, Stonefelt helps keep temperatures uniform at all times, muffles external noises down to a whisper. Its excellent insulating qualities also help cut air-conditioning and heating costs.

For complete information about any of the Johns-Manville products described above, write Johns-Manville, Box 290, New York 16, N. Y.

Johns-Manville 92 YEARS OF SERVICE TO TRANSPORTATION



The Milwaukee Road's new Olympian Hiawatha Speedliner which makes its 2200-mile run from Chicago to Tacoma in 45 hours . . . 14 hours less than former schedules.

1850

Exide Congratulates THE MILWAUKEE ROAD on its 100th Anniversary

1950

As The Milwaukee Road enters its second century, it can look back upon a record of remarkable growth and achievement. Beginning with a 20-mile stretch of track, The Milwaukee Road now has nearly 11,000 route miles that extend 700 miles north and south, and reach from Indiana to the Pacific Coast.

Today, The Milwaukee Road serves twelve midwestern and northwestern states, whose population is one and a half times that of the entire nation in 1850. Credit for much of the development of this area of vast resources is due to the farsighted management of The Milwaukee Road.

For many years Exide Batteries have been serving The Milwaukee Road, providing dependable power for signal systems, car lighting and air-conditioning, Diesel locomotive cranking and other storage battery tasks.

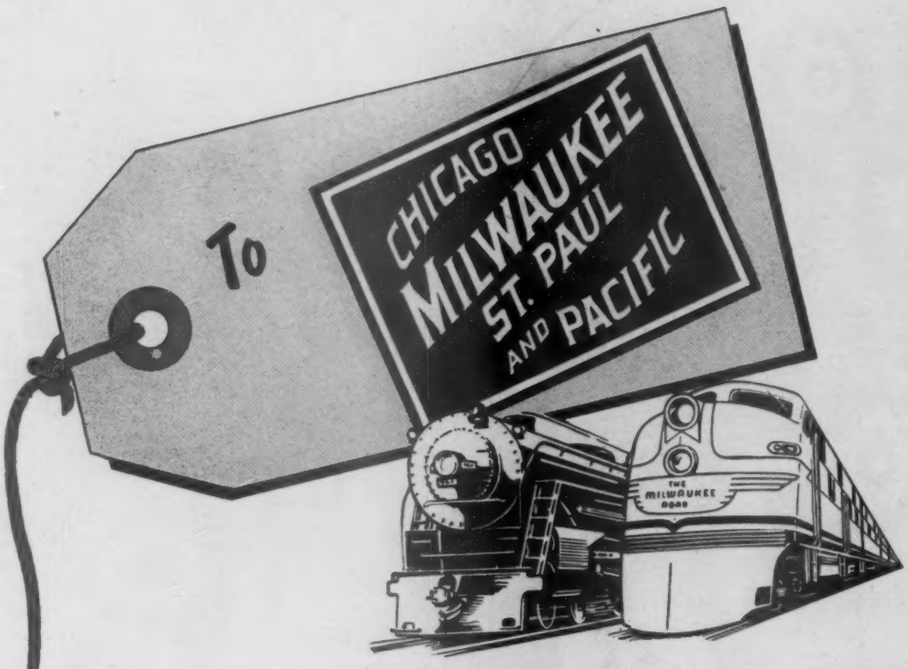
THE ELECTRIC STORAGE BATTERY COMPANY
Philadelphia 32
Exide Batteries of Canada, Limited, Toronto

Exide-Ironclad Batteries are the Best Power Buy . . . AT ANY PRICE

DEPENDABLE

"Exide" and "Exide-Ironclad" *Reg. Trademarks U.S. Pat. Off.*

1888 . . . DEPENDABLE BATTERIES FOR 62 YEARS . . . 1950



CONGRATULATIONS

on your 100th Anniversary!

With glasses filled to the foaming brim, we toast our good friends and neighbors—The Chicago, Milwaukee, St. Paul and Pacific!

We've travelled a long way together—since 1850, when your famous "Milwaukee Road" was founded—and since 1844, when Milwaukeans first enjoyed the product of our "little brewery on the hill."

Yes, together we have grown. Together we have grown and prospered. And together, at the opening of "our second centuries" of a great railroad and a great beer, we are more confident than ever—The Best Years of Our Lives ... *are yet to come!*

Look at Safety...

Look at Efficiency...

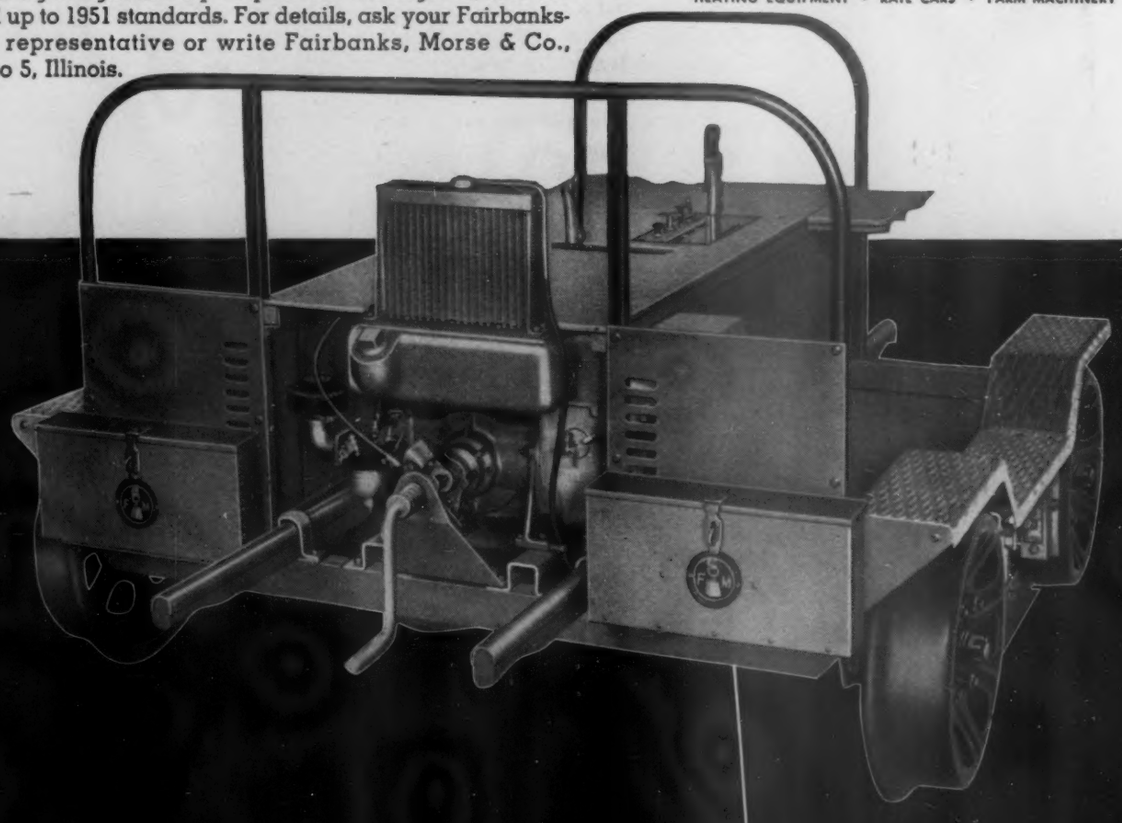
Look at the New Model 101

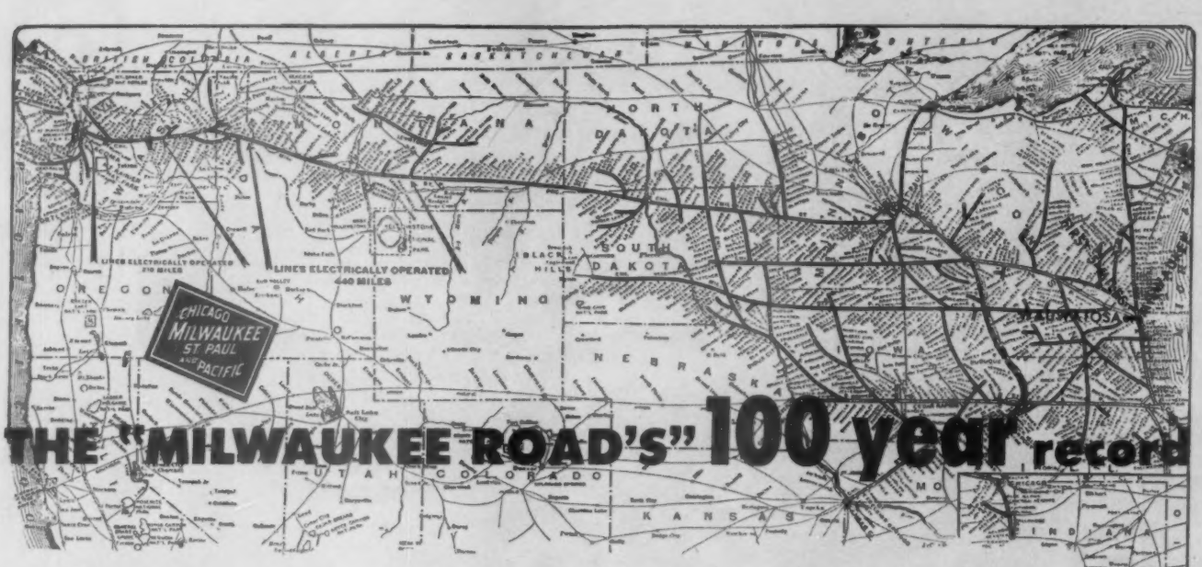
Yes, this inspection car is something to inspect. It offers new standards of safety, new features for on-the-job efficiency. Simple friction wheel transmission provides four speeds forward, three reverse — and, for maximum protection of the crew, an immediate reverse without reversing the engine. Wheel silencers, too, add to safety — allow the crew to hear approaching trains or automobiles. Built to carry four men in comfort, the 101 has a one-man rear lifting weight of only 98 pounds. Throughout, it is designed up to 1951 standards. For details, ask your Fairbanks-Morse representative or write Fairbanks, Morse & Co., Chicago 5, Illinois.

FAIRBANKS-MORSE,

a name worth remembering

DIESEL LOCOMOTIVES AND ENGINES • ELECTRICAL MACHINERY • PUMPS • SCALES • HOME WATER SERVICE AND HEATING EQUIPMENT • RAIL CARS • FARM MACHINERY





THE "MILWAUKEE ROAD'S" 100 year record

Westinghouse
Friction
Draft
Gear

Starting out as a 5 mile railroad November 20, 1850, the Chicago, Milwaukee, St. Paul and Pacific Railroad Company's "network" now supplies transportation from Indiana into twelve Midwestern and Northwestern States, to Puget Sound. Its remarkable growth has been an important factor in the development of the Northwest.

The Cardwell Westinghouse Co. has had the privilege of serving "The Milwaukee Road" for many years.

CARDWELL

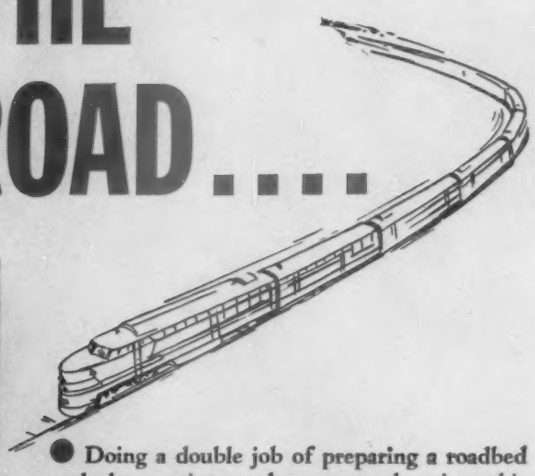
Friction Bolster Springs
. . for A. A. R. and
Long-Travel Springs.

5325

Over 98% of the cars in freight carrying service are A. A. R. construction and over 96% have Friction Draft Gears.

Cardwell Westinghouse Co., Chicago
Canadian Cardwell Co., Ltd., Montreal

INTERNATIONAL POWER WORKS FOR THE MILWAUKEE ROAD....



● Doing a double job of preparing a roadbed and also moving track to a new location, this International TD-9 equipped with a bulldozer shovel made fast work of a switch track relocation for the Milwaukee Road at Bensenville, Ill. Once again, International Crawlers proved their versatility on railroad construction and maintenance work.

International TD-9 moves dirt to prepare the new site for the track.

Owners and operators alike have learned that International Crawlers pay off in work done on the many and varied tasks of railroad maintenance and improvement. James Logalbo, operator of this TD-9, says, "I've never seen a tractor operate so easy for its size. I handle railroad 'frogs' weighing 2500 to 2600 lbs. with no trouble and I have pulled and pushed a string of four coal cars into position on a side track. For my money, this tractor has paid for itself long ago."

Your International Industrial Power Distributor is the man to see about crawler tractor power for railroad work. He will help you select the right size International from a full line ranging up to the TD-24 with 148.4 drawbar horsepower. Get on the right track now with International off-the-track power. You'll find it pays big dividends in work done.

Moving the track to a new location is a simple matter with the agile TD-9 on hand to do the pulling and pushing.

INTERNATIONAL HARVESTER COMPANY • Chicago 1, Illinois

CRAWLER TRACTORS
WHEEL TRACTORS
DIESEL ENGINES
POWER UNITS

INTERNATIONAL HARVESTER

INTERNATIONAL INDUSTRIAL POWER

DOORS • SIDE PANELS
BULKHEADS and PARTITIONS
in This Luxury Car are *73% Lighter*
Than Standard Steel Construction . . .

...because they are MET-L-WOOD

METAL BONDED TO PLYWOOD

● Met-L-Wood, used in passenger cars, locomotives and baggage cars cuts deadweight to a minimum consistent with specified strengths, stiffnesses and durability. As an example, Type 2P2-3/8" Met-L-Wood, used in side panels and partitions has the stiffness of 1/4" steel plate—yet weighs only 2.6 lbs./sq. ft. as against 10 lbs./sq. ft. for 1/4" steel plate!

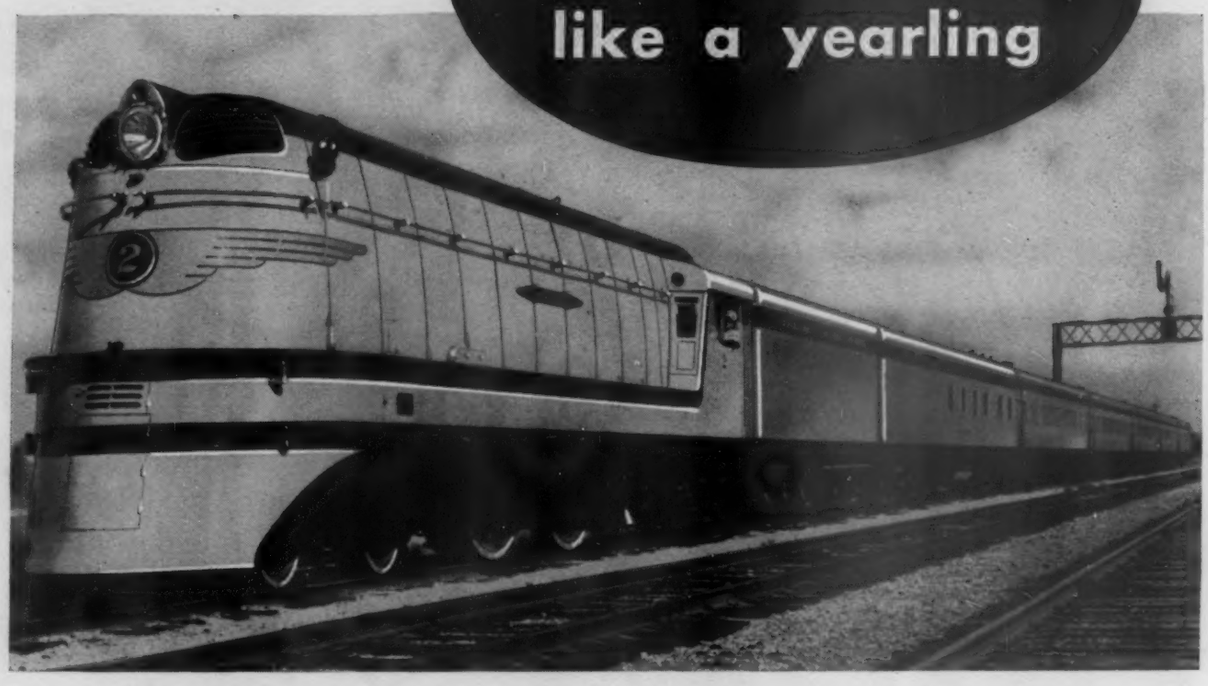
Whether you require prefabricated Met-L-Wood units to your specifications, or can use stock sizes and finishes, the basic utility and economy of Met-L-Wood for railroad rolling stock construction is worth investigating . . . today. Write for details on your specific requirements. Our engineering staff will gladly assist you in adapting Met-L-Wood versatility to your needs.

MET-L-WOOD CORPORATION

6755 West 65th Street, Chicago 38, Illinois

MET-L-WOOD · *STRONG... LIGHT... Smooth Finish... Sound Deadening... Fire-Resisting... Insulating*

this teen-age Hiawatha highballs like a yearling



SKF
BALL AND ROLLER BEARINGS

Back in the early thirties the Chicago, Milwaukee, St. Paul & Pacific R.R. ordered a series of steam locomotives from the American Locomotive Company. They were among the first streamliners—and they've set records that are hard to equal anywhere.

The *Hiawathas* have been in continuous service for more than fifteen years—pulling in on time and requiring minimum maintenance since they hit the rails.

SKF Spherical Roller Bearings were specified for both engine trucks and driving axles. Their inherent ability to withstand misalignment and ability to carry combined radial and thrust loads have made major contributions to the *Hiawathas'* record of dependable service with minimum maintenance.

SKF Journal Bearings are hard at work on steam and diesel engines. Traction motor bearings made by SKF are also railroad standards of dependability.

SKF INDUSTRIES, INC., PHILADELPHIA 32, PENNSYLVANIA—*the Pioneers of the Deep Groove Ball Bearing, Spherical Roller Bearing, Self-Aligning Ball Bearing.* 7139

8 REASONS WHY SKF IS PREFERRED BY ALL INDUSTRY

Integrity — Craftsmanship — Metallurgy — Tolerance Control

Surface Finish — Product Uniformity — Engineering Service — Field Service

UNARCO

INSUTAPE®

Wrap-On

Insulation

- High efficiency reduces heat loss with resultant savings in fuel.
- Flexibility permits quick, easy application to both straight and curved piping.
- Rugged construction permits reapplication without loss of original efficiency.
- Asbestos fiber filler with water-repellent treatment—and outer surface coated to withstand the most severe conditions.

ANOTHER "FIRST" WITH THE RAILROADS

There is no substitute for experience. Unarco's 25 years of close association with railroad operating, mechanical, maintenance and purchasing departments has resulted in the continuous development of more efficient insulations that best fit the accelerated needs of modern railroading. Attendant economies in speedier application and reusability are the reasons Unarco railroad insulations are "first" with railroads throughout the United States.

UNARCO

WOVENSTONE Lace-on Pipe Insulation • INSUTAPE Wrap-on Pipe Insulation • INSUTUBE Slip-on Pipe Insulation • UNARCO Asbestos and Semi-Metallic Packings • UNARCO Asbestos Cloth and Tape • UNARCO Tailored-to-fit Insulations • UNARCO Refrigerator Car Blankets UNARCO Tank Car Blankets • EQUIPCO Hand Brakes • EQUIPCO Refrigerator Car Specialties: Circulating Fans, Bulkheads and Ice Grates UNIBESTOS High-Temperature Industrial Pipe Insulation • ESPEE Sheet-Metal and Steel-Plate Fabricating and Hot-Dip Galvanizing

UNION ASBESTOS & RUBBER COMPANY

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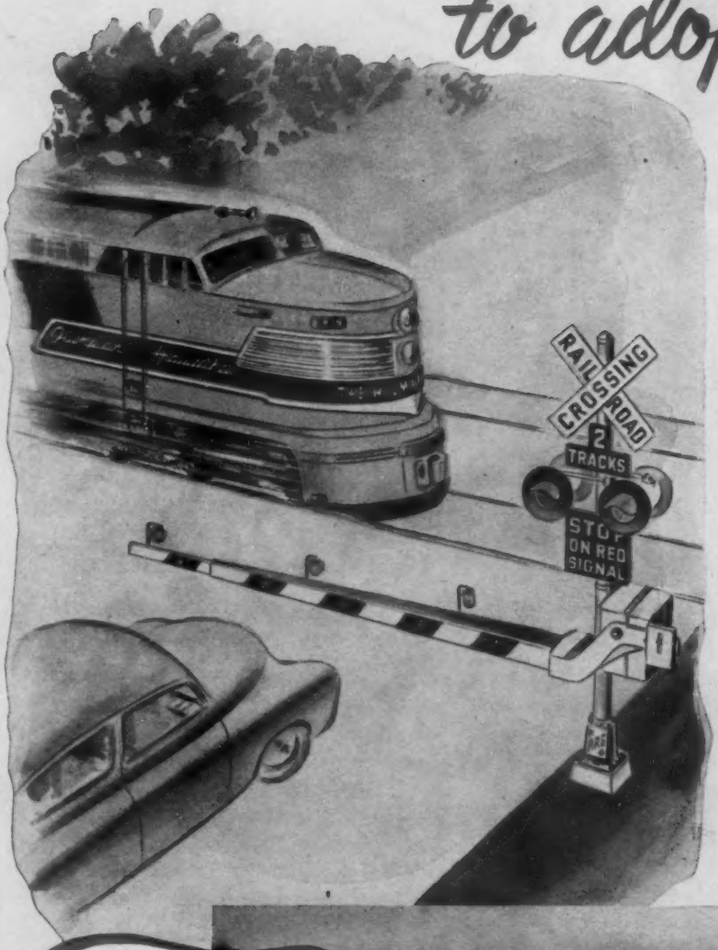

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IN 1856, the *Railway Age* was founded under the title "Western Railroad Gazette". In that year there were about 22,000 miles of railroad in this country which then boasted a population of some 26 millions, and consisted of only 30 states. In 1856 the first train crossed the Mississippi on a bridge from Rock Island to Davenport, Iowa . . . and the now-Century-old Milwaukee was celebrating its 6th year. Such was the picture in 1856 when the present *Railway Age* made its debut.

TODAY, the *Railway Age* serves the railway industry in all of its major activities. During its 94 years of service to its readers, this paper has developed a background of recognition based on editorial merit that is unexcelled among business publications. It reports the news of the industry, and its editorials and articles are written from the broad viewpoint of efficient and economical railroad management and operation.

the current railway scene

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The cardinal precept of the *Railway Age* editorial staff is the accurate, fast reporting of such news and late developments—designed to make *you*, the *Railway Age* reader, a valuable, well-informed member of your department, your railroad, and your industry. And to this end, our editors have succeeded—as evidenced by the overwhelming acceptance of *Railway Age* as the recognized spokesman of the railway industry.

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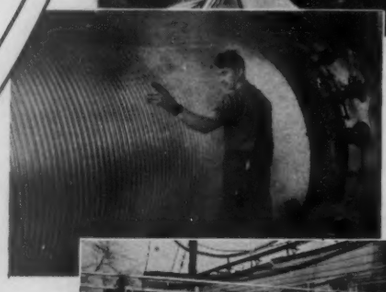

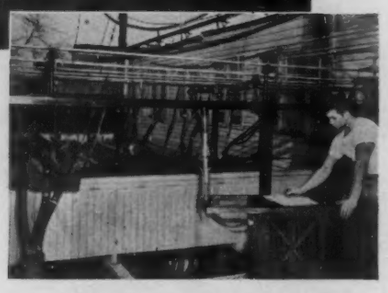

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RAILWAY AGE

EDITORIAL COMMENT

THE ELECTION AND THE RAILROADS

This past week's election settled no great questions of principle—and could not do so, since the voters had few chances to make a clear selection between candidates, one upholding traditional American freedom and the other an outright advocate of growing governmental power. Senator George of Georgia was reelected—but, then, so were such men as Aiken of Vermont and Tobey of New Hampshire. While politicians who were unduly friendly to Communists went down to defeat, no such rebuke went to the advocates of "creeping communism" in the form of more and more governmental spending and invasion of the economy. Probably the only major contest on a question of fundamental principle was the effort in Ohio to unseat Senator Taft—and, there, after a comprehensive debate which went on for over a year, the voters made a clear decision. Any satisfaction to which Mr. Taft's victory may give rise, however, must be tempered by the defeat in Missouri of Senator Donnell, whose position on matters of principle closely paralleled that of the Ohio senator.

There are good people who believe that an industry paper such as this one ought to confine itself to discussing ton-miles, tractive power and earnings—leaving questions of right and wrong to the preachers and professors. That conclusion would be all right if it would work—that is, if questions of right and wrong did not have so much impact on technology and finance. The course of the past fifty years, though, when "practical" people have been primarily engaged in getting money however they could—without thinking much about where they got the right to do so—has left these people with little or no defense when their right to pursue their economic advantage has been questioned. For a man to know and believe in the principles which justify his freedom of action, and to be able to convince others of the wisdom of these principles, is the most "practical" kind of knowledge that anybody can have today. Unless this kind of knowledge can be acquired and spread mighty fast, then other kinds of knowledge are not likely to last long. For example, it isn't going to do a man much good to know how to run a railroad, if railroad leaders are henceforth going to be selected, not because of their knowledge of railroading, but because of their skill at political manipulation.

There is a grim race going on in the world today—to determine whether Western civilization, and the United States in particular, can rediscover the principles and beliefs which were the basis of its long ascendency,

before the Communist conspiracy becomes strong enough to deal civilization a knockout from which there will be no recovery.

The reason why so-called "conservative" policies have been put so much on the defensive is that there is no longer any generally understood body of principles and beliefs upon which the "conservatives" agree. The so-called "liberals" do not suffer from this handicap; they see eye to eye on any proposal to increase taxes or print more paper money in order to distribute "benefits" wherever they will win votes. Too few "conservatives" are interested in conserving anything but their own wealth and influence. The "conservative" manufacturer of highway trailers has no desire to conserve the investment in railroads against the depredations of highway transport, benefiting from the socialization of highway costs. The "conservative" manufacturer who uses a lot of electric power does not bother about conserving the investment in privately owned utilities—instead, wherever he can, he eagerly buys government-produced electricity at an artificially reduced price.

Principles to Safeguard Freedom

One by one, though, the "conservatives" are beginning to discover the cause of their weakness and to realize that only in the recovery of and adherence to the principles which safeguard freedom for everybody is safety for anybody's freedom likely to be found. Gradually, movements and agencies to promote deeper and wider understanding of these principles are being established. One of these agencies, mentioned on several occasions in these columns, is a weekly Washington newsletter called "Human Events." Another is the recently established fortnightly magazine, "The Freeman," one of whose editors is Henry Hazlitt, widely known for his forthright exposition of sound economics in Newsweek magazine.

A recent issue of The Freeman includes an article by George Sokolsky, easily the most erudite and principled of the daily newspaper columnists, in which he makes the following observation:

> ". . . when peoples desert the hard core of their traditions, they become confused; their government becomes chaotic; they either are conquered by a people who garner strength by adherence to a principle of life or they revert to their traditions and save themselves. And the hard core of American tradition is stated in the Declaration of Independence and deals with the inalienable rights of each individual human being by the grace of God; that is the American tradition and faith."

This is, also, the tradition and faith of all Western civilization—to wit, of all Christendom; except that, in America, the doctrine was no longer left with the theologians and philosophers—it was, instead, taken out of the cloister and made the cornerstone of practical government policy. Applied on this continent in almost pure form, without the barnacles accumulated in centuries of absolutist government, this doctrine of individual freedom produced a burgeoning of human progress such as the world never before witnessed.

Admittedly such discussion as the foregoing is all "theory," having nothing immediately to do with ton-miles, tractive force or earnings. In the long run, though, it has everything to do with the quantities which signify material well-being. Because, unless we understand, promulgate and are loyal to a sound doctrine of what man is and how Nature requires that he be treated, there will not be much wealth to measure. There may not even be men left to measure it.

Monopoly Only Where Unavoidable

To be more specific—if freedom is a requirement for maximum human development, then monopoly (in industry, government or labor) should be tolerated only where it is unavoidable, and regulated wherever it is found. In this connection, now that monopoly has so largely disappeared from transportation—must not the principled course be to recognize and welcome the opportunity very largely to "deregulate" transportation? If this conclusion be sound, would it not follow that the solution to the problems of the transportation industry should be sought primarily, not in limiting contract and private transportation except as necessary under the police power (e.g., adequate fees for the use of public property, size and weight restrictions, and safety regulation), but *by giving common carriers the right to compete with private and contract carriers on terms of complete equality?*

TRAVELING ENGINEERS' ASSOCIATION POTENTIALS PROMISING

In former years when steam locomotive fuel economy was a prime railway objective, annual meetings of the Railway Fuel & Traveling Engineers' Association filled the Grand Ball Room of the Hotel Sherman, Chicago, with an attendance of upwards of 1,000 men, at least two or three times more than at the meeting in September this year. In fact, this association was at one time the largest, most forceful and most vocal of all the mechanical supervisory officer associations, a leadership which it has lost, principally because of decreased interest in the steam locomotive.

Looking to the future, *Railway Age* said in an editorial paragraph on page 45 of the September 2 issue that the R. F. & T. E. A. is faced with a real challenge, and asked whether its three major goals of increased fuel economy, improved locomotive operation and better-informed locomotive road supervisors are no longer important. One of the association's past presidents has taken these questions as more or less of a reflection on the organization—his comment appearing in the "Communications" column elsewhere in this issue.

By way of explanation, it may be said that the editorial paragraph in question raised three questions with self-evident answers. It was intended, not as criticism, but

to stimulate consideration of constructive activity in fuel conservation, improved locomotive performance and widening the acquaintance and knowledge of locomotive road supervisors. The association has contributed notably to these three objectives over the years as regards steam power and, in view of the substantial number of steam locomotives still in service, this work should obviously be continued and supported by the supervisors whom it is the function of this association to serve.

It is equally evident that locomotive crews and road supervisors need every bit of help they can get in operating the new Diesel-electric power more efficiently. The association has made a good beginning, but only a beginning, in tapping the possibilities of its usefulness along this line. As an educational and inspirational agency for locomotive operating personnel, as well as for all railway officers interested in fuel economy, the Railway Fuel & Traveling Engineers' Association is second to none. It deserves the full encouragement and support of higher railway officers, as well as of the men in its field, both for past achievements and future potentials.

FIRST THINGS FIRST FOR THE N.I.T. LEAGUE

When the National Industrial Traffic League holds its annual session, on November 16 and 17, at San Francisco, the most powerful shippers' body in the world will tackle a docket of amazing range and complexity—from modified Rule 10 to penalty demurrage. In view of the task at hand, the members of the league may be tempted to stick to the practical details of their business, and to soft-pedal what one "realist" calls "this free enterprise revivalism." It is to be hoped that any such urge will be curbed. Because the hard fact is that none of the "practical" business of the league will be worth a cent if the traffic fraternity loses the framework of private business in transportation in which to conduct its operations.

A year ago, at its Chicago meeting, the league expressed deep concern about the danger of socialization of the railroads—not through public sentiment, but from "economic stress . . . especially prevalent as to our railroads." During the past year everything has conspired to make that threat direr. Public subsidies to rival agencies have increased in size; the St. Lawrence Seaway has moved closer to realization and gained strong support from big businesses; abuse of the highways has further widened the disparity between truck and railroad "costs" (i.e., their expenses of doing business).

The railroads are now, technically, in the hands of the federal government. For the fourth time in seven years, the brotherhoods have produced a crisis of such magnitude as to force nominal seizure of the properties. However perfunctory, the status of government control exists and, as long as its does, there is always danger that the "planners" may find a way to convert and prolong it for their own designs.

Furthermore, the league will meet this year amidst the throes of a state of emergency and with the prospect of a long period of preparedness for war. A year ago its members agreed that there is too much regulation of transport. Now there is every reason to believe that this over-regulation will be further expanded, with the ghost of O.D.T. reborn under the Defense Production Act. It is likely that the shippers will not fall for the brand of national hysteria which some people in government are manufacturing, but will stand fast against unnecessary controls and doctrinaire meddling.

Finally, in contrast to the substantial surplus of freight cars which existed at the time of their 1949 meeting, the league's members must now cope with a severe car shortage—a phenomenon of considerable complexity which generally attracts crack-pot solutions from politicians and bureaucrats. The meeting will want to look with a careful and suspicious eye upon such notions, for example, as the Ellsworth bill for a $250 million government car pool. The competent commodities committees of the 13 regional advisory boards have forecast that carloadings this fourth quarter will jump 25 per cent over the last quarter of 1949. That means that transportation will be in tight supply—always an opportunity for the "planners" to creep into the tent.

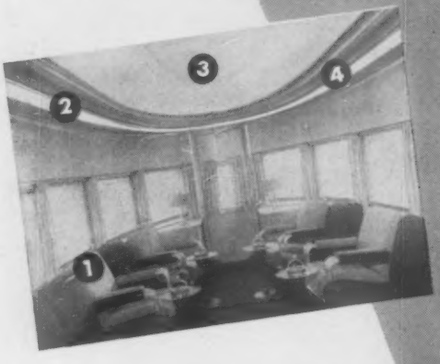
While "covering" the recent convention of the Associated Traffic Clubs of America at New York, editors of this paper found a number of both carrier and shipper members who were critical of the program's large measure of attention to the preservation of private enterprise. To be frank, these critics found the subject boring.

It is an unfortunate fact that most of the big issues in this life tend to be monotonous for the very reason that they are big and ever-present. It is likely that our forebears found very dull the constant discussion as to whether the American colonies should break off from Mother England. The years spent forging a constitutional republic out of a loose and unsuccessful confederation must have produced many a yawn. And the question of secession of states?—oh, hum.

Earl B. Smith, director of traffic for General Mills, Inc., in periodical meetings with his staff, reminds them that transportation is as much part of their own business as raw materials, purchasing, or anything else, and that "The prevention of government ownership is not solely a railroad problem." The big issue for the league, on November 16 and 17 will be: "How can the shippers insure the preservation of capitalism in transportation?"

"American railroads are about the only privately owned and operated ones remaining in the world today, but they also remain . . . the best by a wide margin. . . . There is nothing wrong with American railroads that nationalization would not make worse, and nothing that private management with proper incentive cannot correct."—*San Antonio, Tex., Express.*

Analyze your car interior from...



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"High and Wides" In the Milwaukee's First Hundred Years

Transcontinental railroad conceived a century ago as a local tap line—Unusual growth in Twentieth century

The 10,671-mi. Chicago, Milwaukee, St. Paul & Pacific is the newest of the seven so-called transcontinental routes. Yet its operation as a railroad will be exactly 100 years old on November 20, and many of its most important route segments were conceived and built in the Fifties and Sixties of the last century. Actually the corporate history of the road goes back to 1847.

Reason for Building

The original stretch of the Milwaukee was built by a section of the country which lacked capital resources and population density. It was built not so much as a matter of pride or to bid for future development—as was true of so many railroads—but because there already existed an actual pressing need for railroad transportation between the city of Milwaukee and the Mississippi river. Wisconsin Territory had not yet achieved statehood in 1846; yet the freight charges collected by teamsters and others on traffic between the city and the Mississippi amounted to $352,000 a year. And the facilities could not handle the demand. One local newspaper cried: "Large quantities of surplus produce have been left by our farmers to rot upon the ground the past season, for want of a good communication by which to find a market." Unless a railroad were built, the result, warned the paper, would be "the gradual depopulation of the western part of the territory."

The bugbear of depopulation never appeared. The chief reason was that the citizens of Milwaukee, largest settlement in the territory, decided to do something about it. One of the leaders of this group was Byron Kilbourn —son-in-law of one of the inventors of the steamboat, John Fitch—who came to Milwaukee in 1835 with a vast experience in canal building in Ohio. Kilbourn interested himself at once in a proposed canal joining the waters of the Mississippi and the Great Lakes. He succeeded in getting the United States to grant land to the company and even made a few attempts at beginning construction.

Mortgages and Crops for Stock

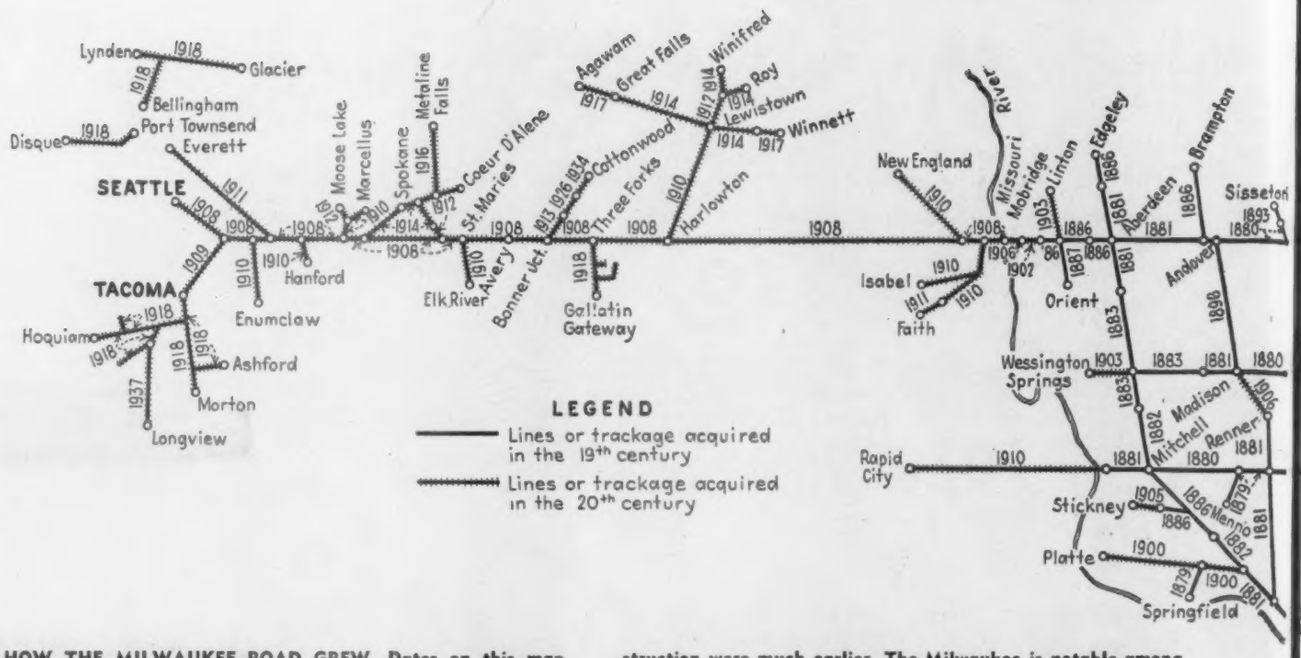
But the day of the railroad had come. By 1847 Kilbourn and his group joined in obtaining the charter for the Milwaukee & Mississippi Rail Road Company (initially, Milwaukee & Waukesha Rail Road). Upon the formal organization of the road in 1849 (one year after Wisconsin had been granted statehoood) Kilbourn, who was then mayor of Milwaukee, became its first president. The authorized capital was $100,000, and the charter permitted the road to be constructed from Milwaukee to Madison (the state capital), "and thence west to such point on the Mississippi as the said company may determine."

THE SMALL FRAME BUILDING just left of center in this illustration is the original station of the Milwaukee & Mississippi in Milwaukee, constructed in 1850

Since this was before the day of the "welfare state," the people to be served by the railroad had themselves to raise the money for its building. Being short of ready cash, many of them contributed, not money, but goods and the sweat of their own hands. When grading was begun in the fall of 1849 it was carried on for an entire year by orders drawn on subscribing merchants payable in goods. As August Derleth describes it in his "The Milwaukee Road": "The harness-makers paid in harnesses and repairs; the farmers paid in cattle, horses, beef, pork, oats, lumber, timber, potatoes, and flour; the wagon-makers paid in carts and wagons; and many people paid in labor, for which in turn all received stock."

But this was not enough. It was obvious that hard cash was needed. It was equally obvious that few eastern bankers would consider loaning money for a railroad in thinly populated Wisconsin. This log jam was broken at a promotional meeting when the mayor of one of the towns along the line said that, if one hundred men between Milwaukee and the Rock river would do likewise, he would mortgage his farm and go East—where he originated—to get money to buy railroad stock. The 100 men were found and the necessary cash was drawn from mortgages placed on farm property.

Despite a parsimonious economy and the normal hostility which met most original railroad projects, the



HOW THE MILWAUKEE ROAD GREW. Dates on this map show when the various segments of the railroad—including trackage rights—were acquired. In some cases dates of construction were much earlier. The Milwaukee is notable among big railroad systems for the large proportion of its route-miles constructed or acquired in the 20th century

M. & M. pushed steadily westward. Grading of the right-of-way was completed in the middle of 1850, to be followed by the laying of the rails—which were plannned to be on the wide gage of six feet, emulating the New York & Erie, but actually were laid to standard. By November, five miles had been laid, an accomplishment which called for a celebration. On the 20th, the directors and prominent Milwaukee citizens were taken for a ride on the first railroad in Wisconsin in two open freight cars behind Old Number 1 (later "Bob Ellis," "Iowa" and "Number 71"). It is this first run which is the focus of the road's centennial observance.

Boasted a Wisconsin newspaper at the time: "No state in the union, and no country in the world, has ever heard the snorting of a locomotive at so early a period of its settlement. No wonder the editors throw up their caps and make a joyful noise. Had we been there, we would have thrown ours so high that it never would have come down."

On February 25, 1851, the first formal trip to Waukesha, 20 miles distant, was undertaken, with the usual meed of band music, addresses, fireworks and dinners. Oratory had it that the new road would "capture the towns with our iron horse and enrich our neighbors as well as ourselves" and that the new railroad would "annex all towns." By April 2 daily trains were operating in each direction.

Extension to the Mississippi

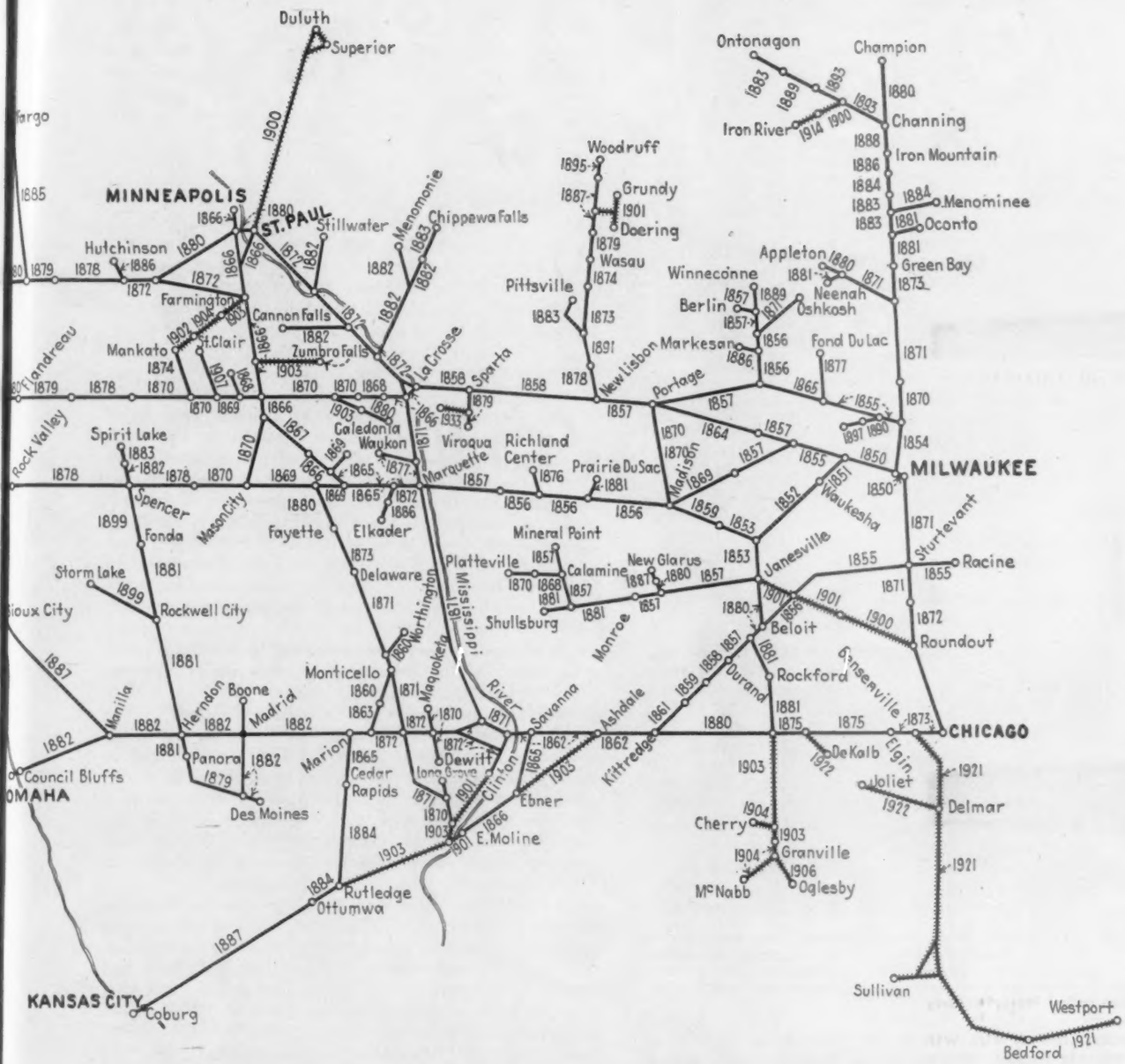
Even before the new road reached Madison it was clear that, to forestall undue competition, it should reach the Mississippi as soon as possible. Prairie du Chien was the original goal, because it was an old settlement and because it was the point from which the Pacific railroad projected by Asa Whitney would take off. In 1853 the Milwaukee road built the first box car in its own shops, thereby initiating a policy which was to last to the present day.

On April 15, 1857, the M. & M. was open to Prairie du Chien on the banks of the Mississippi. The first train through comprised handsome new passenger cars built in the company shop in Milwaukee (precursors of a century of company-built passenger equipment) and was welcomed to the shores of the great river by a salute of 200 guns by an artillery company. To symbolize the new facility, an eight-gallon keg of Lake Michigan water was emptied into the Mississippi. Two years later the company installed as a ferry at Prairie du Chien "The Lady Franklin," a strange craft built to run either on water or on ice.

The 1857 Debacle

In 1857 the country was thrown into a financial panic which did not spare the M. & M. In 1860 the company defaulted on bond interest and went into receivership with a claimed indebtedness of $6 million, plus capital stock amounting to $3.5 million. In January, 1861, the property was purchased by a new concern, called the Milwaukee & Prairie du Chien, for $7.5 million, in the interest of its creditors.

The collapse of the M. & M. and other roads not only made the stock held by local farmers and merchants worthless—or nearly so—but the panic brought with it foreclosure of the farm mortgages assumed for its purchase. The enraged farmers whose homes and livelihood were thereby placed in jeopardy became incensed at all railroads, without discrimination — a bitterness which finally led to grangerism and to restrictive legislation by the state. The railroad officers who had once been painted as public servants were now vilified as criminals, despite the fact that they had themselves lost heavily by the railroads' collapse.



The debacle of 1857 affected all of the small weak lines then building in Wisconsin and placed them on the bargain counter. To this opportunity sprang one Alexander Mitchell, a well-regarded Milwaukee banker, who moved in to take them over. He began with the Chicago & Milwaukee, then moved simultaneously to get both the Milwaukee & Prairie du Chien and its paralleling rival, the La Crosse & Milwaukee (which went bankrupt in 1849 and was sold in 1863 and reorganized as the Milwaukee & St. Paul). Mitchell was noted for his practical-mindedness and his insistence that control of Wisconsin railroads be kept in Wisconsin. Mitchell was convinced that only a strong unified system built around the original M. & M. could compete with railroads outside the state.

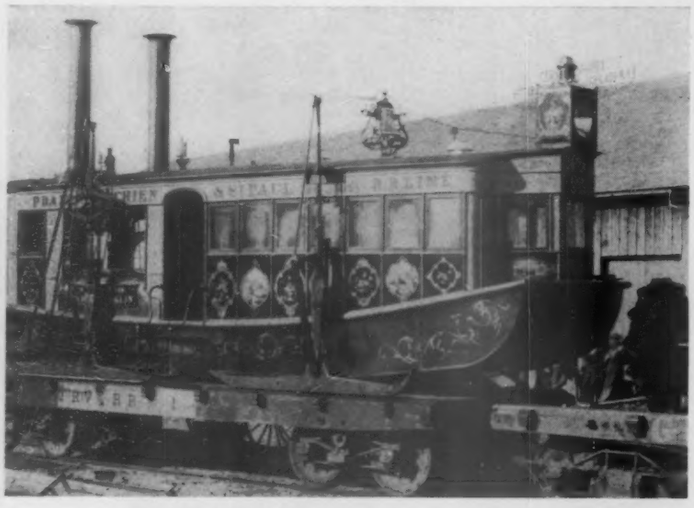
In 1865 Mitchell, already head of the M. & St. P., was elected to the presidency of the Milwaukee & Prairie du Chien and the two roads—both of which extended from Milwaukee to the Mississippi—were brought together under the same management.

The two roads were merged on December 31, 1867. The new combination operated 820 route-miles and that year enjoyed net earnings of more than $2 million. This was the largest railroad property in the Midwest at the time. It operated 125 locomotives, 122 passenger-train cars, and 2,248 freight-train cars. The combine owned, in addition, two separately operated railroads west of the Mississippi. Further "mopping up" in Wisconsin was vigorously pursued and, by the end of 1869, the Milwaukee & St. Paul controlled every through route from the lake shore to the Mississippi.

Rivalry Squelched

The company's great rival was the Chicago & North Western and Chicago was the burgeoning competitor of the city of Milwaukee. Even this rivalry was somewhat abated. By the end of 1869, the directors of the two companies had been elected to each others' boards and Mitchell had become president of the North Western as well as the M. & St. P. Controlling 2,300 miles of

OLD NO. 1 HAULED THE FIRST TRAIN on the Milwaukee's parent segment on November 20, 1850. Built by the Norris Works, Philadelphia, in 1848, it was the first locomotive to turn a wheel in the state of Wisconsin. It weighed 46,000 lb., and burned wood



THIS TINY CRAFT, titled "Lady Franklin," was built to run on water or on ice. It was moved to Prairie du Chien on the Milwaukee & Mississippi in 1859 and was used for a short time in ferry service across the Mississippi and north to a point called Harper's Ferry

OPERATION IN THE WINTER OF 1868-69, on the Iowa & Minnesota division, escaped none of the difficulties of prairie railroading

line, this "community of interest"—however short in duration—represented one of the greatest concentrations of ownership in the country. A group of small, bankrupt railroads had been forged into a useful, prosperous system, which already looked beyond Wisconsin for new worlds to conquer.

The 1870's reaped the whirlwind of previous abuses and brought onerous regulations and outright destruction of railroad values. Mitchell's persistent extension of power nevertheless continued. In 1873 the M. & St. P. attained ownership of its own line between Milwaukee and Chicago and was no longer dependent upon the C. & N. W. for entrance into the commercial capital of the Midwest. In the same momentous year it was extended on the west through to Minneapolis and St. Paul.

Chicago Becomes Home Base

After the Civil War the city of Chicago grew more and more important in the scheme of things. The M. & St. P., although its corporate ancestry was founded on Milwaukee, nevertheless found it prudent to go where the traffic went. In February, 1874, the name of the railroad was changed to Chicago, Milwaukee & St. Paul, by which title it was to be known until 1928—long after it had extended its line far beyond the title cities. In 1880 the Milwaukee acquired, by lease, the Chicago & Pacific, which, with other properties already controlled, gave it a route due west out of Chicago and crossing the Mississippi between Savanna, Ill., and Sabula, Iowa.

Crossings of the Mississippi were a major physical problem. In 1863, a standing contract was made with a private individual to tow cars on a barge between Prairie du Chien and McGregor, Iowa. In 1874 the contractor erected at this point a pontoon bridge which could be opened to allow the passage of steamboats. In 1891, after almost a million cars had passed over it, at $1 a car, the Milwaukee took over the bridge. One of the same type is still in operation at that point. Another crossing of the Mississippi was made at La Crosse in 1876, when an iron bridge was completed.

By 1880 the Milwaukee property was big business indeed. It operated 3,775 miles of road, whereas, only three years before, its total mileage stood at 1,412 miles. It owned 425 locomotives, 319 passenger-train cars and 13,315 freight-train cars. It was a $100 million property, and one of the biggest economic forces in the Midwest.

The Mitchell era came to an end in 1887, when the builder of the Milwaukee as a system passed away. His great and loyal operating officer—S. S. Merrill—had died in 1884. In 1888, Roswell Miller, a reticent and respected man, who was known as a strict disciplinarian, became, at 42, president of the C. M. & St. P. Mitchell left behind him a railroad operating 5,670 route-miles, spreading over five states and Dakota Territory. Its central terminus had shifted from Milwaukee to Chicago. The road had seven bridges crossing the Mississippi and Missouri rivers and owned a large number of grain elevators and warehouses, together with coal mining property in Illinois and Iowa.

Armour Influence

Possessed from the first of more freedom from outside domination than most railroad companies in the West, the Milwaukee remained jealous of its independence, and continually fought against being drawn into the current toward mastery by eastern financial centers. It went so far as to run its own sleeping cars and, as noted, began at a very early stage to manufacture its

own locomotives and cars. In short, the Milwaukee played "with its cards close to the vest."

In the 1870's, nevertheless, two powerful industrial dynasties began to buy into the road. By the middle of the 1880's the board of directors included Philip D. Armour, of Chicago packing interests, and William Rockefeller, representing Standard Oil. The Harkness interests, represented by Henry Flagler, also entered into the road's control. Thus the Milwaukee, reluctantly, was drawn into a nationwide struggle between industrial giants. The aim of the Rockefeller interests was to keep the Morgan-Hill railroad combination out of Chicago, a goal in which they were joined by E. H. Harriman, who had a kind of "working agreement" with the Standard Oil group. After 1896, Hill had both the Northern Pacific and Great Northern and Harriman had the Union Pacific. The Milwaukee linked Omaha and the Twin Cities, respectively, with Chiacgo. To keep its independence was obviously difficult. This state of "suspended animation" was ended when Morgan-Hill obtained control of the Burlington and so gained an entrance into Chicago.

The turn of the century saw the Milwaukee 50 years old and ready to begin a second 50 years filled with events as portentous as the first—though entirely different in complexion. The year before, President Miller had been succeeded by Albert J. Earling, a Milwaukee railroader since he was 17 and, it is claimed, a pioneer in the development of the block signal system. He was noted for his knowledge of men.

The Western Extension

When the 20th Century began, the Milwaukee was operating 6,596 route-miles, reaching as far west as Bowdle, S. D., only 40 miles short of the Missouri river. The early years of the century brought to a slow boil in the minds of the Milwaukee's management the idea that it must expand westward to the Pacific Coast to protect itself from more extensive competitors and the combination of the Hill interests. It was becoming clear that railroads would find their greatest traffic opportunities in manufactured products and that to remain a "granger road" would subject the company to periodical depressions and slow decay of net earnings. The early years of the century were prosperous and the West was growing rapidly. The Milwaukee had money. The first move was made in 1901 when an engineer was sent to study the Northern Pacific to find out how much it would cost to duplicate it. His report was that it could be done for $45 million.

On November 28, 1905, the board authorized the Milwaukee to build to Seattle and Tacoma, Wash. The job started at Mobridge, S. D., on the Missouri. The railroad received no land grants or free right-of-way. It had considerable difficulty in acquiring the so-called "Jawbone Line," on which J. J. Hill held a mortgage, but which it needed for its route. Between Harlowton, Mont., and Seattle the Milwaukee had to cross five ranges — the Belts, Rockies, Bitter Roots, Saddles and Cascades, as shown in the profile diagram in this issue.

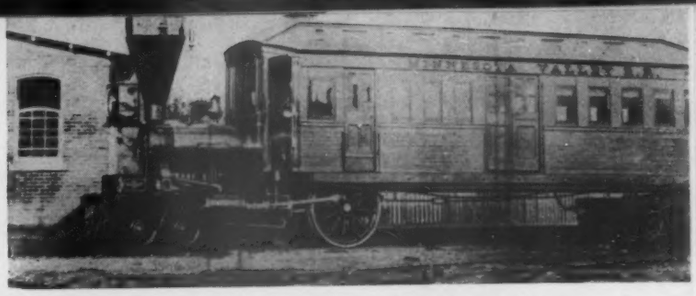
Electrification

Actual construction of the 854-mi. extension was achieved in less than three years, beginning in September, 1906, and ending May 14, 1909, when the last spike was driven four miles west of Garrison, Mont. By August 15, 1909, local passenger service was established, and in 1911 through passenger trains were inaugurated.

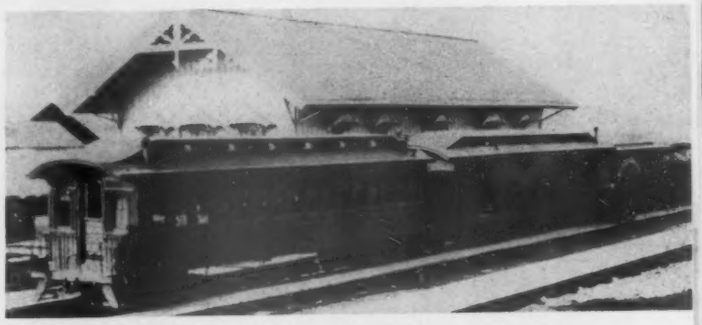
Even before it was through to the Coast, the road set about purchasing or constructing branch-line feeders in the newly opened territory. In the four years between 1906 and 1910 the Milwaukee grew from 7,043 to nearly 10,000 route-miles.

The Pacific Coast Extension had favorable grades, comparable to the other transcontinentals, but grades they were, nevertheless. Temperatures went as low as 40 degrees below zero, making steam operation difficult. The line had an abundance of tunnels, including the 8,771-ft. St. Paul Pass bore. Waterpower was readily available and copper was produced along the road at Anaconda, Mont. In 1912 the company took the historic step of long-distance electrification for heavy traction and made contracts for electric power. Work on the 438 miles between Harlowton, Mont., and Avery, Idaho, was begun in 1914. For the first time in this country, electric locomotives were equipped with regenerative braking, which recovered approximately 12 per cent of the entire power used by all trains. On December 30, 1915, the road's first electrically hauled train operated from Three Forks, Mont., to Deer Lodge, 112 miles.

Success of this project in lowering unit operating costs, increasing speeds and trainloads, and reducing braking



LIGHT-TRAFFIC BRANCHES WERE A PROBLEM to the Milwaukee even "back when." This combination locomotive and car (including a baggage compartment) was in service on the Milwaukee up to 1877. It was originally built for the Minnesota Valley



IN 1871 THE MILWAUKEE & NORTHERN, later absorbed into the Milwaukee, ran its first train into De Pere, Wis.

THE PHOTOGRAPHER, WHO TOOK A PICTURE OF THIS EXCURSION TRAIN for the St. Paul Jobbers Union, at Red Wing, Minn., on July 12, 1884, gave posterity a priceless record of Milwaukee equipment of that era

difficulties on grades led the directors, in January, 1917, to authorize further electrification between Othello and Tacoma, Wash., 207 miles, and between Black River and Seattle, 10 miles, which was completed early in 1920.

Acquisition of the Terre Haute

In 1917 President Earling was succeeded by Harry E. Byram, brought from the Burlington—"the president-maker"—for the purpose. World War I brought the road—like the rest—under government operation and left it with its fixed and rolling properties depleted and under-maintained.

In 1921 the Milwaukee leased the Chicago, Terre Haute & Southeastern, a 360-mi. road giving it direct access to the southern Indiana coal fields and a more direct connection with eastern lines than that afforded at Chicago. The Milwaukee had experienced acute coal shortages during the war. Although it was one of the largest independent railroads in the United States, on no part of it were there coal mines sufficient to supply it locomotive fuel. In 1920 it incurred freight charges of $3½ million for locomotive fuel. The Terre Haute became an integral part of the company on December, 1948, and today is one of the top divisions in density of traffic.

Receivership of 1925

On March 18, 1925, the Milwaukee went into receivership, and Mr. Byram, Mark W. Potter and Edward J. Brundage were appointed receivers. The following day Milwaukee common sold at a low of 5, compared to 199⅝, 20 years before. At the time, the Milwaukee was the largest railroad ever to have gone into the courts. Mr. Byram said publicly: "This road went into the hands of receivers for two reasons: adverse economic conditions in the Northwest and a top-heavy financial structure." Important factors, too, were the opening of the Panama Canal in 1914, which destroyed much of the railroad's transcontinental traffic before it could begin to exploit its costly Pacific Coast Extension.

On March 31, 1927, the Chicago, Milwaukee, St. Paul & Pacific Railroad Company was organized to acquire the property and, on January 13, 1928, took over the property, with H. A. Scandrett, lately a vice-president of the Union Pacific, as its new president. Property improvements were continued and intensified until the coming of the Great Depression.

The Milwaukee felt the depression of the '30's more than most roads because: (1) Agriculture—especially one-crop farming—was the hardest-hit of all enterprises. (2) Drought and dust storms compounded the depression. (3) The granger roads got from the Interstate Commerce Commission a blow in the Western Trunk Line decision of May, 1930, which provided for a general rate increase on short-haul traffic and decreases on long-haul. This had the effect of driving high-rated short-haul traffic to the trucks and decreasing revenues on the staple traffic of the railroads.

The Milwaukee therefore proved to be not as depression-proof as its reorganizers had hoped in 1928. In June, 1935, a petition in bankruptcy was filed, and, in October, H. A. Scandrett, Walter J. Cummings and George I. Haight were appointed trustees. The trusteeship lasted for ten years, during which there was played a complicated drama of conflicting plans, lawsuits, and even suggestions of merger with the C. & N. W. Stockholder interests carried the battle to the United States Supreme Court, which, on March 2, 1943, approved the management's plan of reorganization excluding stockholders from participation in the new company.

Late in 1945, reorganization of the railroad was consummated according to a modified plan certified to the federal district court by the I.C.C. The president of the new company was its former head, Mr. Scandrett, with Leo T. Crowley as chairman of the board. Top fiscal control was vested in five voting trustees, representing various classes of securities affected by the reorganization.

In May, 1947, Mr. Scandrett retired, and was succeeded by C. H. Buford, a Milwaukee man since 1907, who had behind him a distinguished war record as the vice-president of the Association of American Railroads having most to do with meeting the desires of the armed forces. Mr. Buford, in turn, retired effective September 1, 1950, to be succeeded by John P. Kiley, who first joined the road in 1913.

The five years which have elapsed since reorganization have been a period of upbuilding, as well as pruning to meet modern conditions—a story which is told in the article which follows.

THE GREAT LOOP east of Falcon, Idaho, in the Bitter Roots, is typical of the means by which the Pacific Coast Extension was pushed to minimum grades. Taken in 1929, the view shows the "Olympian," crack transcontinental train

MOST OF THE MILWAUKEE'S TOP MANAGEMENT is in this picture. (Seated, left to right): P. W. Pillsbury, director; W. T. Mahoney, director; Joshua Green, director; A. N. Whitlock, vice-president and general counsel; J. B. Gallagher, director; Judson Large, director; Elmer Rich, director and voting trustee; J. P. Kiley, president; Charles H. Buford, retired president; L. T. Crowley, chairman of board of directors and voting trustee; J. W. Severs, vice-president—finance and accounting; J. D. Allen, director and voting trustee. (Standing, left to right): L. H. Dugan, vice-president; R. J. Marony, retired vice-president; L. F. Donald, vice-president —operations; W. G. Powrie, chief engineer; T. W. Burtness, secretary; W. A. Dietze, public relations officer; L. K. Sorensen, general manager—Lines West; M. J. O'Brien, assistant to chairman; J. T. Gillick, retired vice-president; M. L. Bluhm, general solicitor; J. O. McIlyar, Southeastern traffic manager; P. H. Draver, vice-president—traffic

The *New* Milwaukee's First Five Years

Management, under five-man voting trust, has grappled with big problems in struggle to bring once bankrupt road to self-sufficiency

It may have occurred to you that in the case of a corporation or an institution, natural laws are seemingly reversed. Men, when they grow older, seek repose, take their ease and let younger men carry on, but the older a company or an institution is, the better and stronger it is expected to be. With age, it gains rather than loses strength. Its managers do not plan a program which tapers off as time passes but, on the contrary, they strive for a constantly expanding goal of progress and improvement. This is particularly true of companies engaged in public service, of which a railroad is a typical example."

Thus did Leo T. Crowley, chairman of the board of the Chicago, Milwaukee, St. Paul & Pacific, describe the phenomenon of perpetual—indeed increasing—youth in a railroad corporation, in an address this month before the St. Paul (Minn.) Transportation Club at a luncheon to celebrate his railroad's centennial. The Milwaukee has never been so youthful as during the past five years when its management, with financial responsibilities set down in broad outline by a five-man voting trust, has done battle with a host of difficulties in the struggle to bring the 100-year-old railroad to financial health after a decade in the courts.

Reorganization was effective as of December 1, 1945. Under its plan of revampment, on this date control of the property was vested in five voting truestees, designated, respectively, by the institutional investors, the mutual savings bank group, the 50-yr. mortgage bond committee,

PRESIDENT KILEY TOOK OVER on September 1

the trustee for adjustment mortgage bonds and jointly by the preferred and common stockholders. The voting trustees are: John D. Allen, James M. Barker, Walter J. Cummings, Elmer Rich and Chairman Crowley—all of Chicago. According to the plan, the trust automatically expires on December 1, 1950.

The five years of the voting trust may well prove to be the most important single period in the history of the

SINCE THE ROAD CAME OUT OF REORGANIZATION IN 1945, almost $145 million have been expended in capital improvements, like the extension and modernization of Bensenville, its main Chicago freight yard

BETTER SERVICE COMES FROM THE LARGE CAPITAL EXPENDITURES made by the Milwaukee under its voting trustees in the last five years. Here is a vertical lift bridge at the road's modernized Galewood (Chicago) freighthouse

road—at least insofar as its future is concerned. For in these five years were made expenditures, changes in techniques and pruning—both physical and financial—which bid fair to yield pay dirt in the Milwaukee's Second Century.

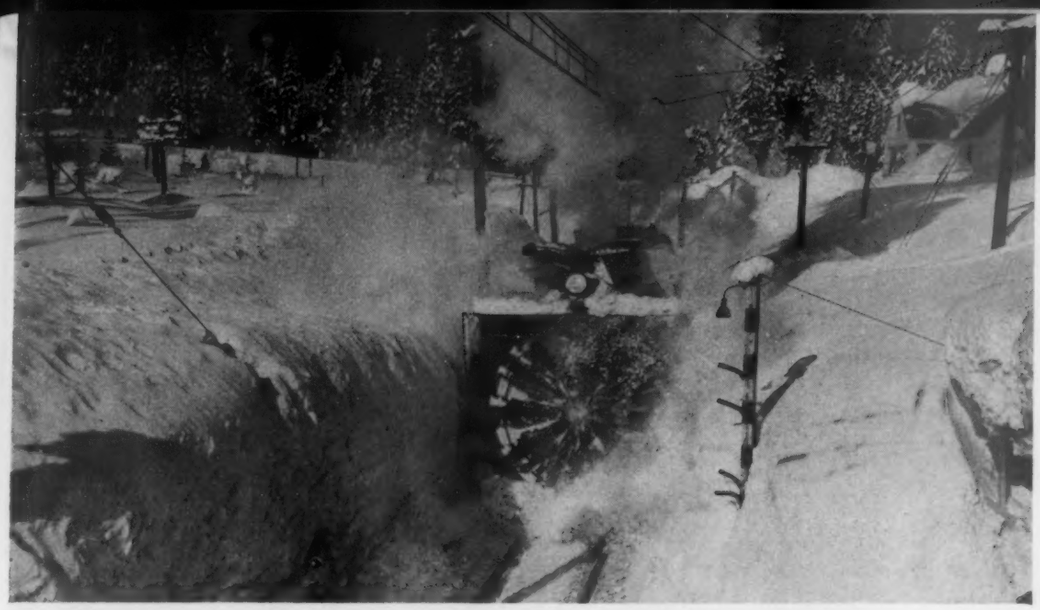
The Milwaukee is a very large and sprawling railroad. Its 10,671 operated route-miles extend into 12 states (with minor mileage in two more), from Chicago to Puget Sound, north to northern Michigan and east and south as far as Westport, Ind., which is east of both Indianapolis and Louisville. It is the fifth largest railroad system in the country in length; and twelfth in total operating revenues. The Milwaukee operates 4.7 per cent of all route-miles in the U.S., while it earns 2.8 per cent of total and freight revenues and 2.2 per cent of passenger revenues. It currently employs more than 33,000 men and women. Its rolling stock comprises 1,144 locomotives, more than 60,000 freight cars and a fleet of modern "speedliners."

In the five-year struggle to regain health after almost ten years of invalidism in bankruptcy, the railroad's management has confronted a tangle of "built in" handicaps which must be reckoned into any analysis of their accomplishment. Management itself does not hesitate to point out publicly that "the physical aspects of the railroad are not conducive to low cost operation, and compare unfavorably with other of the northwestern railroads in that respect." It calls attention to the Milwaukee's "far-flung property, relatively low traffic density, and high terminal and station expenses."

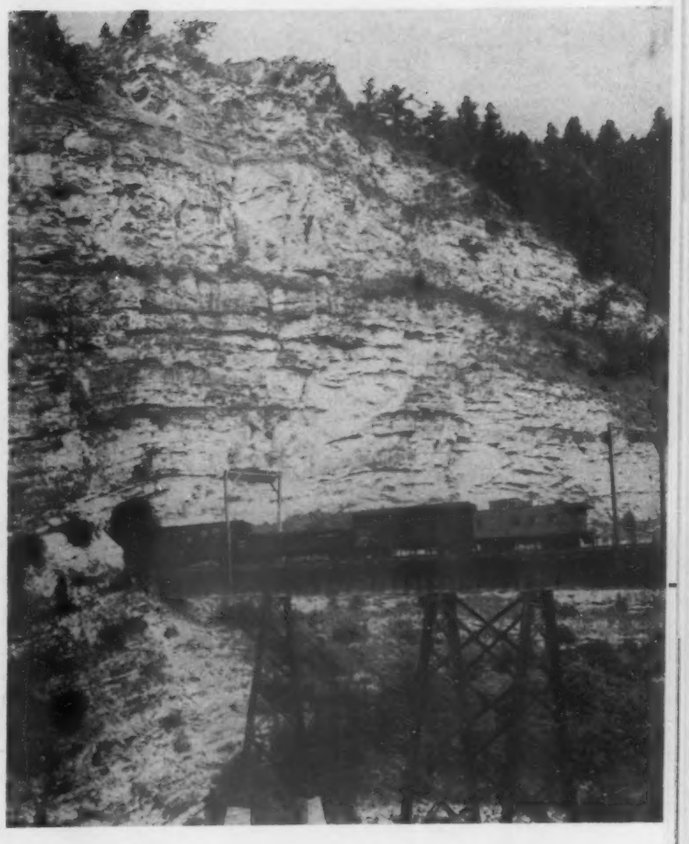
The road has many branch lines in an area which is already "over-railroaded." Its traffic density is below that of the two transcontinental lines with which it most directly competes. As a result, only peak utilization—as in World War II—makes possible a good statistical performance for the system as a whole; otherwise the light-density mileage is a burden and nightmare in slack periods. Also, and not so apparent, the road has a relatively short average haul for freight on Lines East (east of Mobridge, S. D.) and a high proportion of terminal cost relative to road-haul expenses. A survey in June, 1949, showed that the terminals at Chicago, Milwaukee, St. Paul and Minneapolis alone accounted for

Table 1—Three Periods of Milwaukee Expenditures Compared
(Gross Capital Expenditures for Road and Equipment)

Years	Road	Locomotives	Freight-train cars	Passenger-train cars	All Other	Total Equipment	Grand Total
1925-1929	$38,804,946	$2,159,403	$37,159,778	$2,375,855	$2,232,319	$43,927,355	$82,732,301
1931-1935	20,980,483	1,186,128	574,317	2,549,208	999,373	5,309,026	26,289,509
1946-1950	41,415,031	33,451,998	50,451,053	17,431,394	2,035,624	103,370,069	144,785,100



DIFFICULT SNOW CONDITIONS ON LINES WEST require a large investment in specialized equipment, like this rotary shown at work near Hyak, Wash.



RUGGED TERRAIN REQUIRES RUGGED RAILROADING. Here is a quick transition from height to depth at the portal of Eagle Nest tunnel, Mont.

more than 25 per cent of all transportation expenses of the entire system and more than 33 per cent of such expenses on Lines East. The city of Milwaukee is the biggest originator of freight on the system, but it is also a very expensive job to serve it. It is apparent that the great mass of trackage filling up Milwaukee's Menominee valley, and the tenuous, sidetrack-flanked right-of-way of the "Beer Line," penetrating the city's waterfront and downtown area, are virtually paved with expense vouchers. The same goes for the Goose Island area in Chicago, for example, and busy Chestnut street in St. Paul.

Like the other transcontinentals, the Milwaukee also faces the hazards and burdens of operating through the great western mountain ranges with their snows and slides and natural obstructions. Of the total of 64 tunnels on the railroad, 42 are found on its Rocky Mountain and 19 on its Coast divisions. The St. Paul Pass bore, on the former, is more than a mile and a half long, while the Snoqualmie, on the latter, is well over two miles in length. The road also maintains 14 snow sheds to protect tunnel approaches. The accompanying profile diagram shows the principal mountain grades and summits between Ryegate, Mont., near the start of the approach to the most easterly of the five mountain crossings, and the Pacific Coast.

A railroad which has been through the courts, it is often said, has a moral obligation to pay dividends because its stockholders are usually former creditors who have been given shares in exchange for interest-bearing securities they held before reorganization. Consequently, there has existed for the Milwaukee's management during the past five years neither the excuse nor the means to indulge in lavish spending out of pride or perfectionism.

When the five-year period, 1946-1950, is ended, that management will, nevertheless, according to latest estimates, have completed gross capital expenditures of almost $145 million. As shown in Table 1, this total is 5½ times the capital expenditures made in the five depression years, 1931-1935, immediately preceding filing of petition in bankruptcy. More significant, the 1946-1950 additions and betterments represented an outlay which was 75 per cent greater than gross capital expenditures made during prosperous 1925-1929, a period of notable improvement by the country's railroads. Even taking into account the reduced buying power of the dollar, the improvement program of the first five years of the *new* Milwaukee is, set against the record of the past, a notable one.

It is noteworthy also that an overwhelming proportion of 1946-1950 expenditures—71 per cent—were for equipment, while only 53 per cent of the 1925-1929 expenditures, and 20 per cent of the 1931-1935 improvements. were for rolling stock. Almost $33½ million was spent in the recent five years for locomotives alone, compared with only $2 million in 1925-1929 and $1 million in 1931-1935. Virtually all of this immense sum was spent for Diesel-electric or modern all-electric power—a form of investment notable for high annual return through reduction in operating expenses.

Altogether, during the past five years, the Milwaukee

TABLE 2—EQUIPMENT PURCHASED OR CONSTRUCTED IN COMPANY SHOPS, 1946 - 1950

(1950 partly estimated)

Equipment	No. Units	Cost
Locomotives		
Diesel-electric:		
6,000 hp.	11	$6,653,619
4,500 hp.	24	11,999,652
4,000 hp.	7	2,578,168
2,400 hp.	1	198,982
2,000 hp.	1	199,471
2,000 hp. intermediate unit	1	211,562
1,500 hp.	24	3,136,691
1,200 hp.	13	1,279,938
1,000 hp.	50	5,028,139
Total Diesel-electric	132	31,286,222
Electric	12	950,000
Total locomotives	144	32,236,222
Freight-train cars		
Box	5,372	20,526,365
Automobile	1,000	4,250,808
Hopper	1,290	4,774,753
Gondola	6,200	16,661,438
Refrigerator	200	1,300,000
Log flats, skeleton	500	725,289
Flat cars, depressed	4	32,841
Caboose	115	605,645
Total freight-train cars	14,681	48,877,139
Passenger-train cars		
Coaches	72	5,409,831
Diners	12	1,087,897
Lunch-lounge	8	653,771
Diner-lounge	4	358,189
Cafe-parlor	6	544,058
Parlor	8	629,827
Sleepers	40	4,453,773
Baggage-dormitory	8	507,823
Baggage	20	833,551
Mail and express	23	1,098,549
Railway postal	2	92,543
Coach-sleepers	6	506,968
Parlor-observation	4	354,251
Motors, Diesel-electric	2	275,876
Total passenger-train cars	215	16,806,907
Work and floating equipment	13	850,980
Grand total		$98,771,248

has dedicated to the service of the public more than $103 million worth of new or rebuilt rolling stock. The $99 million package of equipment purchased or built new in company shops is listed in detail in Table 2.

Not included in Table 2, but ordered during the five-year period, is more than $12 million worth of additional new equipment which, it is estimated, will still be on order, but not delivered, at the end of 1950, comprising:

50	Diesel-electric locomotives	$ 7,572,100
400	refrigerator cars	2,600,000
250	covered hoppers	1,575,000
80	other freight cars	639,200
	Total	$12,386,300

The more than $31 million invested during the five-year period in new Diesel units, together with locomotives purchased prior to reorganization, have brought this form of motive power, within a short span of time, to a position of importance in the operations of the Milwaukee. When the straight electric units operated in electrified territory are added to the Diesel-electric fleet, the combined totals show that, by January, 1950, at least half of each type of service was being performed with electric drive and that, when locomotives now on order are placed in service, electric power will show a clear dominance in all three services:

	July 1949	Jan. 1950	Estimated Potential with Diesels on Order
Freight gross ton-miles	38.2	50.2	70
Passenger train-miles	54.2	59.1	85
Switching locomotive hours	49.6	49.8	70

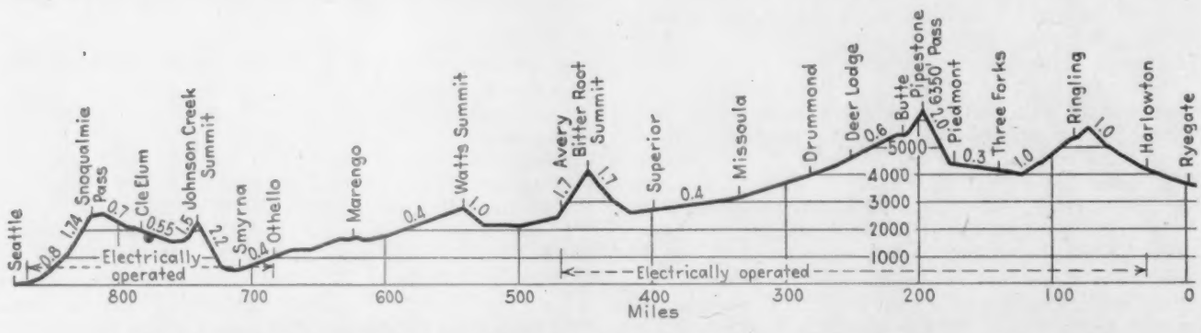
The proportion of straight electric service rendered in January, 1950, was 7.6 per cent of freight gross ton-miles; 10.1 per cent of passenger train-miles and 1.4 per cent of switching hours.

Power in electrified territory was substantially improved in capacity and quality by the purchase, in the summer of 1950, of 12 electric locomotives built originally for Russia, which, because of international developments, could not be delivered to that country. Constructed to sell for $3[illegible]0,000 apiece, the locomotives were obtained by the Milwaukee for about $79,000 each. Replacing a larger number of locomotives built in 1915 and 1916, each does the equivalent work of two units of the old type and at higher speeds. Savings in operating costs are large.

To the almost $49 million spent on new freight cars during the five-year period there must be added, for accurate appraisal of the success of the Milwaukee in gearing itself to meet the needs of a growing economy, the high output of repairs by company car forces to keep the older cars ready for service. Both these classes of investment in the future show up in the Milwaukee's "bad order" freight car ratio (i.e. proportion of cars awaiting or undergoing repairs to total ownership) which, as of September 1, was three per cent, compared with a national average of 6.3 per cent. A month later, the Milwaukee's ratio was reduced to 2.5 per cent.

Fixed Improvements

Expenditures on fixed properties during the voting trust period, 1946-1950, were chiefly for the purpose of adapting the property to new techniques of operation as, for example, Diesel locomotives and mechanical freight handling station equipment. Expenditures for new locomotive and car shops and servicing facilities totaled $6,878,000. Major projects were a new passenger car body and truck shop at Milwaukee, costing $1,438,000, and new Diesel locomotive repair and servicing facilities at Bensenville yard and Western avenue, respectively, in Chicago, and at Milwaukee, representing $2,611,000. For new and improved freight and passenger stations and



THE MILWAUKEE CROSSES FIVE MAJOR MOUNTAIN RANGES in the 883 miles between Ryegate, Mont., and Seattle. The sections of the line with the steepest profile characteristics are electrically operated, as shown

additional facilities there was committed during the period a total of $3,206,000. The more important jobs included two freighthouses at Chicago costing $460,200; a potato warehouse at Mannheim (Chicago) costing $428,000; and modernization of the Sioux City (Iowa) passenger station, $208,800.

Extension and modernization of important freight yards on the system completed during the five-year period included:

Savanna, Ill.	$900,000
Milwaukee, Wis.	
Glendale and Port Washington Yards	304,300
Muskego Yard	252,300
Chestnut Street Yard	330,100
St. Paul, Minn.	270,100
Bensenville, Ill.	236,200
Total	$2,293,000

Expenditures for other major fixed property improvements during the period were:

$8,870,000 for heavier rail and track fastenings
$5,386,000 for bridges, trestles and culverts
$2,650,000 for centralized traffic control and automatic block signals

Not included in Table I is $700,000 for improvements to fixed property which will be authorized to the end of 1950, but not completed.

It is significant that, of the total of $145 million expended in additions and betterments during the five-year period, only $7.5 million was appropriated out of net income, the sum of $2.5 million having been appropriated in each of the years 1946, 1947 and 1948, under the "optional" improvement fund authorized by the plan of reorganization. No appropriation from earnings was made in 1949 or thus far in 1950. The bulk of capital improvement expenditures found their source in depreciation allowances, retirement charges, the proceeds of salvage recovered from property retired and, for rolling stock, the sale of equipment obligations.

Pruning Dead Limbs

Concomitant with the building up of the property to make or save money has been the pruning of the dead limbs to free the useful tissue of parasites. Since the beginning of 1946, the Milwaukee has discontinued, on an annual basis, a total of almost one and one-half million train- or vehicle-miles of train, rail motor car, mixed train and bus service—most of it during 1949 and 1950. At present wages and prices, this curtailment of service, formerly rendered at a heavy loss and without the satisfaction of real economic demand, will mean to the railroad a reduction in operating expense and payroll taxes, on an out-of-pocket basis alone, of some $1,790,000 a year. Discontinuance of another 300,000 train-miles a year, with $200,000 annual savings estimated, is presently under study.

During the period a total of 61 route-miles of branch line (including 22 miles of trackage rights) have been abandoned, which mileage had produced a deficit of about $75,000 in 1945. Previously, from 1928 to the effective date of reorganization on December 1, 1945, the Milwaukee had abandoned about 500 route-miles of branch line. During reorganization proceedings the trustees furnished the Interstate Commerce Commission with studies of estimated savings to be accrued from the abandonment of additional segments aggregating 3,000 miles.

Immediately prior to the termination of trusteeship, the road joined the Rock Island and the Kansas City Southern in consolidation and modernization of their extensive terminal facilities at Kansas City, which has subsequently saved large sums compared with the continued operation of independent properties.

To speed up service, as well as to save ineffective train-miles and station time, the road's subsidiary Milwaukee Motor Transportation Company further extended its truck service in lieu of way-freight train operation. Its present route-miles operated (one-way) total 1,567, an increase of 329 per cent over the mileage served at the beginning of 1946. Annual savings resulting from further substitution of railroad-owned trucks for way-freight service and for former contract truck operations made effective during the period 1946-1950 are estimated at $243,000. Applications for additional truck service have been made to state authorities and the I.C.C.

Hacking at Debt

One of the best-known financial statistical services in the country recently characterized the Milwaukee's financial position as "good," giving as one of the reasons the fact that, through its reorganization, "an unwieldy financial structure was eliminated and fixed charges cut drastically." But the railroad's management has not rested content with even this relatively favorable debt structure and, to the maximum extent possible, has, in each year since reorganization, whittled down its long-term funded debt by buying bonds in the open market. By these and other operations, in the period December 1, 1945, to September 30, 1950, mortgage debt was reduced by close to $26 million (out of a total mortgage debt unmatured, in the hands of the public, as of the end of 1949, of somewhat over $167.5 million). As a result, annual interest requirements of the road are now well over $1 million less than they were when it came out of reorganization.

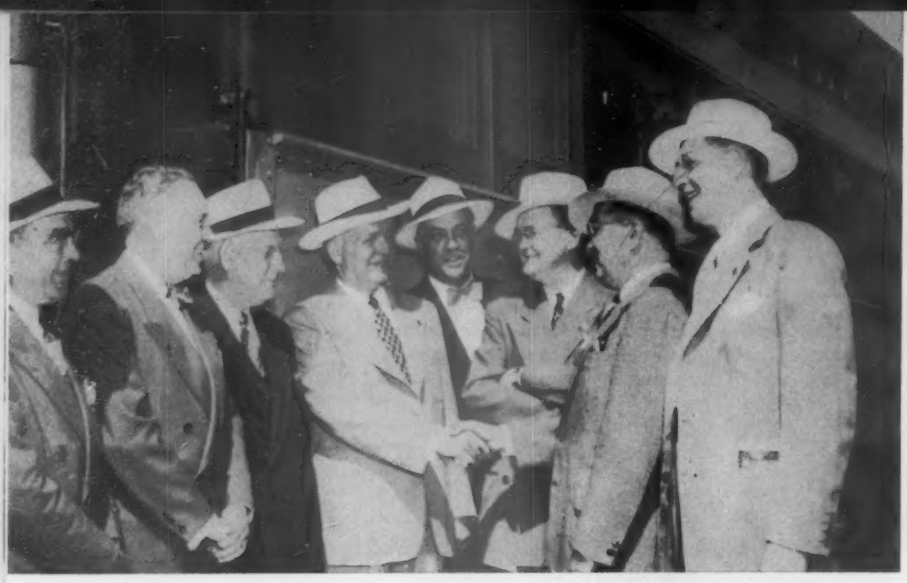
Increased efficiency has enabled the railroad to adjust its personnel to changes in the level of traffic. The average number employed during 1949—35,131—was about 6 per cent less than the number employed during 1946. Ton-miles of freight hauled by the road declined about the same percentage between the same years. A comparison of the latest available 12 months' period, ending July 31, 1951, with the calendar year 1945, shows a drop in average number of employees of more than 14 per cent—from 38,589 to 33,338. The total wage bill, nevertheless, increased because each Milwaukee employee enjoyed successive pay increases during the intervening years. Average annual compensation jumped from $2,758 to $3,755, an increase of 36 per cent.

The best single index of efficiency and service in operations—because it reflects both load and speed—is gross ton-miles per freight-train-hour (excluding locomotives and tenders). The Milwaukee's management has produced a fairly consistent improvement in this measurement during the five-year period since reorganization, despite a generally declining traffic level, as follows:

1946	35,015
1947	34,474
1948	34,645
1949	37,054
1950 (8 mos.)	39,744

This index of efficiency reached a recent system "high" in August, 1950, when it touched 43,125, or an increase of 16 per cent compared with the same month in 1946.

For the celebration of its centennial, the Milwaukee's management chose a slogan which looks forward rather than backward—"Opening our second century." In the success of this second 100 years the improvements made and planned during the five years since reorganization should play an important part.



THE MILWAUKEE'S MANAGEMENT MADE THE MOST OF ITS CENTENNIAL opportunity to meet friends along the line. Typical was this group arriving to take part in the centennial dinner of the Aberdeen (S.D.) Chamber of Commerce. (Left to right): H. L. McLaughlin, Minneapolis, general northwestern freight agent; Harry Sengstacken, Chicago, passenger traffic manager; H. S. Zane, Chicago, freight traffic manager; P. H. Draver, Chicago, vice-president—traffic; J. W. Wolf, assistant superintendent, Montevideo, Minn.; H. M. Larson, Minneapolis, assistant general passenger agent; J. A. Jakubec, Aberdeen, superintendent; George Neu, Aberdeen, division freight and passenger agent

Getting Public Relations Value From a Centennial

Milwaukee fully exploits opportunity to make good impression on customers, employees and neighbors in its territory

November 20 will mark the 100th anniversary of actual operation of the first train over the oldest segment of the Chicago, Milwaukee, St. Paul & Pacific—five miles of rickety track between Milwaukee, Wis., and Wauwatosa. This day is the high point of the road's centennial year and cause for considerable whoop-de-do, as well as serious searching of memory, for the city of Milwaukee, birthplace of the railroad and still originator of more cars of freight for it than any other point on its line.

To do it honor, the citizens will, according to plans now in the works, join the railroad in a re-enactment of the first run to Wauwatosa in a locomotive, under steam, and two cars of the 1850-type. Crew and passengers will be in full costume. Represented will be celebrities of the day. The Milwaukee Road's Mixed Choral Club of 50 voices, in 1850 garb, and the 55-piece "Hiawatha Band" of Milwaukee employees will render a musical program. Civic officers, directors and officers of the railroad and officers of the Milwaukee Association of Commerce will view the pageantry at the railroad's passenger station.

Upon its return from Wauwatosa, the old-time train will meet a six-car train of newest equipment and both will remain on public display throughout the day. Participants in the run and witnessing dignitaries will parade to the Shroeder Hotel for a special Association of Commerce luncheon at which Chairman Crowley and President Kiley will make brief addresses.

Year 'Round Observance

But the public relations department, back in 1949, started to make certain that the Milwaukee's centennial opportunity was not shot off on one day in one city. The management agreed that the marking of a century of operation afforded opportunities to bring to the entire 12-state area served by the line facts about its economic effect, its present-day facilities and services, and history—both palatable and sound—to help bury some erroneous and widespread notions about the past of railroading.

In 1948 a private publisher produced a 330-page, illustrated history of the Milwaukee by August Derleth, well-known Wisconsin writer. While this work was not sponsored by the railroad, the author conferred with its public relations advisory committee before starting work, and the public relations department furnished considerable data and photographs and read proof. The railroad purchased a sufficient number of copies to provide one for each public library and institution of higher learning in the principal communities it serves.

As a part of its centennial program, the railroad produced, early this year, an attractive 50-page pamphlet titled "Four Generations on the Line." By ingenious resort to diary-letter treatment, this illustrated piece sets forth all of the important facts in the Milwaukee's first 100 years without the heavy-handed bulk of conventional chronological narrative. Excerpts purporting to come from a farmer's diary cover 1850-1875; jottings of his telegraph-operator son summarize the second quarter century; *his* son, turned merchant, follows the westward trek of the Milwaukee in a diary covering 1900 to 1925; while the most recent 25 years are cared for by letters exchanged between the merchant and his railroader son.

"Four Generations" not only humanizes the railroad as an adjunct of family life but succeeds as well in matching corporate events with the things going on in national life—like wars and new Presidents. To date about 62,000 copies of the publication have been dis-

tributed, including at least one to each of the road's 33,000-odd employees. It is anticipated that some 10,000 additional will be distributed before this centennial year is out.

The search for historical material was carried on by the public relations department in places as widely divergent as Chicago's Newberry Library and the scrapbooks of "railfans," whose generous interest was aroused through advertisements directed to them in specialized periodicals. The "Milwaukee Magazine" broadcast appeals for historical material to existing employees and "old timers" on the railroad, which produced a large number of fine photographs, memorabilia and anecdotes. The files of the 38-year-old magazine itself yielded facts for the later years of the history. Research led many places. Pursuit of facts, for example, brought the department for the first time into personal contact with a granddaughter of Alexander Mitchell, an early president of the Milwaukee family. The lady in question happens to be a sister of the late General "Billy" Mitchell, of the Air Force.

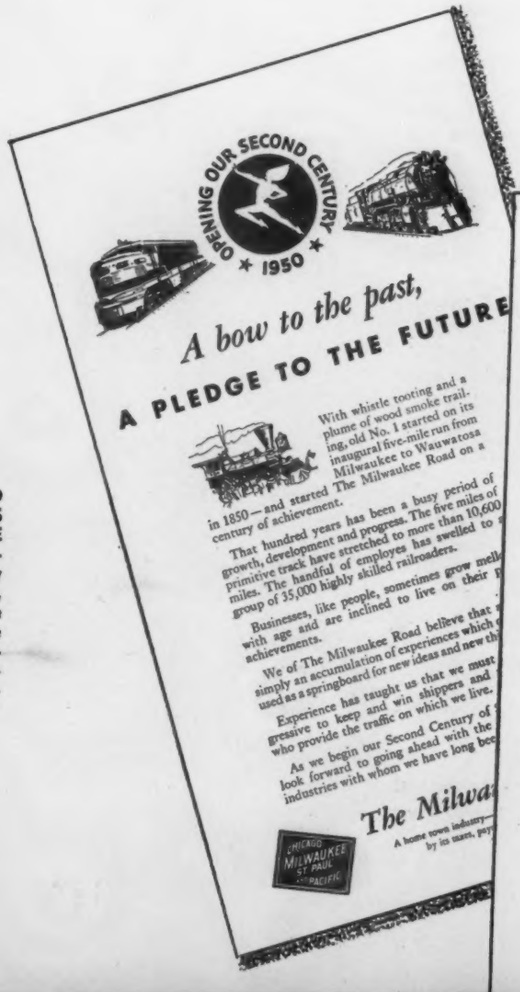
Trips and Speeches

The Milwaukee did its best to bring its top management into personal contact with the maximum number of people along its lines, without taking too much of their time. In July there was operated a directors' inspection tour over the whole of the main line between Chicago and Seattle and Tacoma which was tied in, as far as possible, with centennial luncheons, dinners and other observances along the line. Thus far this year, Chairman L. T. Crowley has been the speaker at six centennial meetings, at which the number of directors present varied from 5 to 9, out of a total board of 15. The president was the speaker at five other centennial meetings, which most of the board attended. Other officers of the road have been encouraged to accept the extraordinarily large number of invitations to address service clubs, schools and other organizations received by the road this year. For their guidance the public relations staff furnished a "dope sheet," but urged spontaneous presentation and local color.

The Milwaukee has not encouraged the people along its line to put on impressive displays, parades, pageants or other celebrations. A number of communities nevertheless insisted on doing so. In Miles City, Mont., in Perry, Iowa, and in Wausau, Wis., for example, businessmen sponsored special activity on the day of centennial meetings and, at Deer Lodge, Mont., the entire day of the appearance of the road's board was given over to recognition of the Milwaukee by residents from all over the big county surrounding.

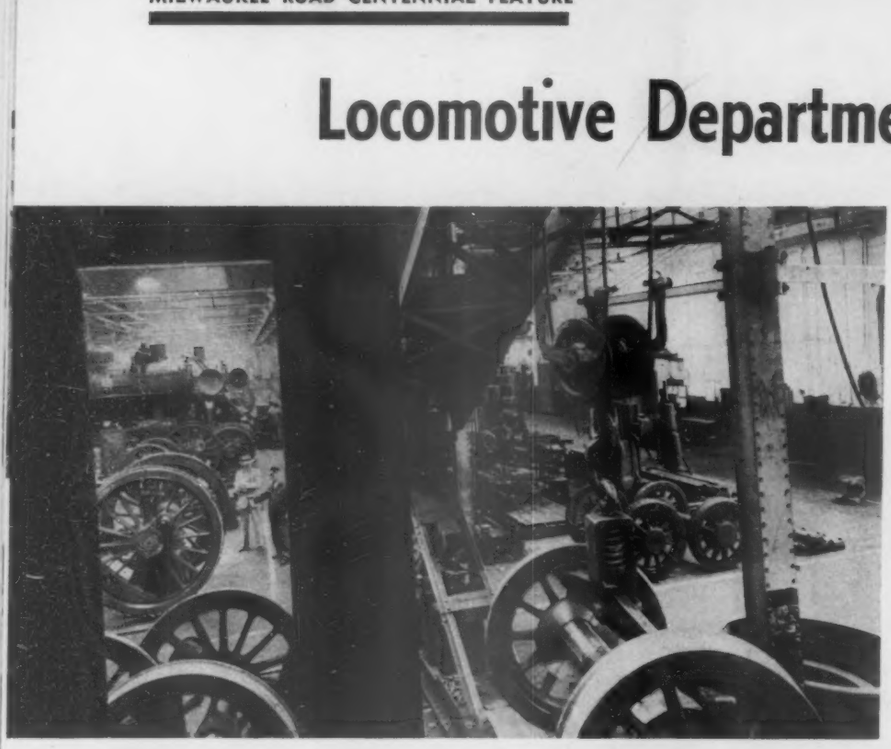
The advertisement here reproduced, "A Bow to the Past," was placed early this year in most on-line dailies and weeklies, with the exception of a few major metropolitan centers. Tie-in ads have been placed in newspapers in Omaha, Chicago, Kansas City and Seattle which were themselves celebrating centennials or "progress" this year.

In addition, in each city and town holding a centennial luncheon, dinner or meeting, there has been run a "keyed" advertisement, illustrated by the accompanying "To the People of Decorah—Greetings, and thanks, from an old friend." A second "birthday advertisement" is scheduled to appear in selected papers along the line simultaneously with the celebration in Milwaukee on November 20.



MOST DAILY AND WEEKLY NEWSPAPERS ON THE MILWAUKEE carried the advertisement on the left early this year. In addition, "keyed" messages, like that to Decorah, were run in newspapers simultaneously with centennial luncheons and dinners

Locomotive Department Developments



Left—Part of the Milwaukee locomotive shop

Below—A heavy steam locomotive on the transfer table at Milwaukee shops

on the Milwaukee

Large maintenance force plus improved facilities are essential to meet modern motive power requirements

A 6,000-hp. Diesel-electric locomotive hauling the "Olympian Hiawatha"

In 1949, the last full calendar year for which figures are available, the Milwaukee locomotive department utilized an average of about 5,000 employees who put in 12 million man-hours of work and were paid approximately $17¼ million. The operating ratio of this department, 6.40 per cent in 1949, has been increasing slightly in recent years, but less than might be expected considering the rapid increase in material and labor costs as compared with railroad rates and earnings.

A measure of Milwaukee locomotive department progress is afforded by comparing Diesel and steam locomotive operation in 1945 with that in 1950. The Milwaukee had 820 steam and 216 Diesel-electric locomotives in operation on August 31, 1950, which may be compared with 1,066 steam and 86 Diesel locomotives on August 1, 1945.

During the first eight months of 1950 steam locomotives made a total of 13,472,833 miles. Diesels made a total of 10,212,294 miles. In comparing Diesel with steam operation, the Diesels, approximately one-fourth the number of steam locomotives, made over two-thirds of the mileage made by steam in that eight-months' period. Bearing in mind that the Diesel usually hauls considerably more cars than the steam locomotive, it is evident that the availability and the gross ton-miles performed with Diesels are much higher than that obtained from steam power.

New Locomotive Shops

In the past five years, the Milwaukee has constructed a four-stall Diesel maintenance shop at Milwaukee; has added three stalls to the Diesel maintenance shop at Western Avenue, Chicago, and is now completing a two-stall Diesel maintenance house at Bensenville, Ill. At Othello, Wash., the Milwaukee also has installed one Diesel maintenance track in the enginehouse. These maintenance shops have depressed floors and raised platforms, a system of construction adopted by practically all railroads operating Diesel locomotives. As most of the maintenance work is performed in the body of a Diesel, the raised platform is a great time saver in handling the work efficiently, thus keeping the availability of the Diesels at the highest level.

At Tacoma, Wash., the Milwaukee has a two-stall house utilized for the maintenance of Diesel and electric locomotives and has recently taken five stalls from the steam house for servicing the electric units. All of the aforementioned Diesel houses are equipped with drop tables to expedite the removal of trucks.

A mechanical washer has been installed during the past five years for cleaning both cars and Diesel locomotives at Western Avenue. Tacoma and Milwaukee now have balancing machines for traction-motor and generator armatures and a load-testing machine is planned for Milwaukee. Several sizes of armature lathes and new baking ovens are about to be installed at Milwaukee.

The drop tables put in use within the past five years have saved approximately 75 per cent of locomotive out-of-service time and at least 50 per cent in man-hours for truck removals. The balancing machines, armature lathes and new type bake ovens produce an indirect saving but should be considered more of an absolute necessity in order to accomplish repairs in a manner which will assure trouble-free operation.

Power Plant Improvements

About ten years ago, the Milwaukee instituted a program of rebuilding its larger stationary power plants developing 100,000 lb. of steam per hour or over.

Originally two-drum horizontal water-tube boilers of the Heine type were used, of 300- to 350-hp. rating. These boilers all had traveling grate stokers of different makes. At that time the Milwaukee did not have any type of mechanical combustion control, as that function was performed by the firemen. The last plant to be improved or rebuilt was at Milwaukee, which originally consisted of ten boilers of the Heine type.

The ten Heine boilers were replaced by four four-drum bent-tube boilers of the Sterling type, each having a maximum capacity of 60,000 lb. of steam per hour or a combined capacity of 240,000 lb. They are built for a working pressure of 250 p.s.i. and are equipped with superheaters, combustion control and spreader-type stokers with a moving chain grate to provide continuous ash removal. The draft under the grate is furnished by a forced-draft fan mounted in back of the boiler, while uptake draft is supplied by a 200-ft. chimney.

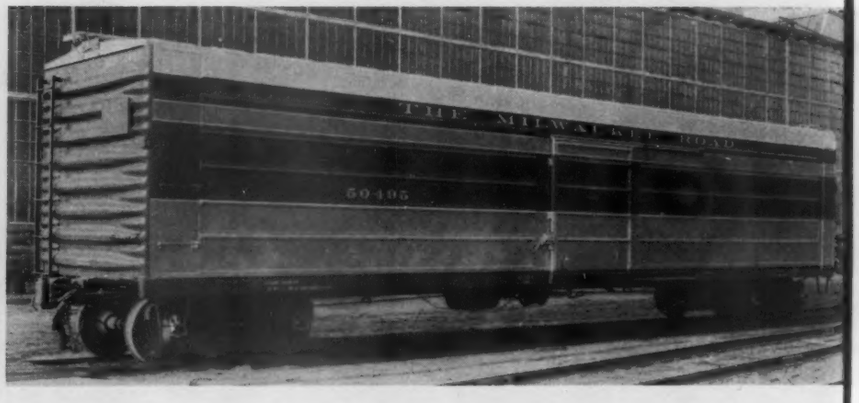
At the Western Avenue power plant in Chicago, four-drum bent-tube boilers of the Sterling type were installed complete with stokers and combustion control to take care of the increased demand for steam. At the Minneapolis plant, two-drum bent-tube boilers were installed. These boilers are equipped to burn Bunker C fuel oil and have combustion controls.

The installation of the new type boilers in these power plants increased their efficiency from 5½ lb. of water per lb. of coal to from 7 to 8½ lb. of water per lb. of coal, depending on the type of coal furnished.

Above—A Sky-Top lounge of one of the Milwaukee's observation cars

Left—Automatic multiple-head spot-welding machine used in building Milwaukee cars

Below—Milwaukee box car in front of the shop where it was built



Left—Application of the car roof to the assembled underframe, sides and ends

Below—The welded underframe is being turned over for easier application of underneath parts

Milwaukee Car-Department Progress

Over 10 million man-hours of work per annum for repairs, exclusive of new cars—Shops greatly improved

During the past few years, Milwaukee car department forces increased slightly to an average of 4,817 in 1948 and then dropped in 1949 to 4,477 employees, exclusive of those engaged in building new cars. The total number of man-hours on maintenance work in 1949 was roughly 10¼ million; the pay roll just under $15 million; and the operating ratio 4.22 per cent.

An examination of statistics for 1949 shows that 380 passenger cars were repaired at Milwaukee shops at an average cost of just over $4,000. Schedule repairs to 4,171 freight cars averaged $393. With an ownership of 1,103 passenger cars, 122 were retired during the year and 94 new ones received from the shops. The freight-car ownership, as of December 31, 1949, was 59,522, retirements during the year being 1,121 cars and new cars installed, 4,512.

Personal injuries were reduced substantially from the 1948 figure, amounting to only 3.85 per million man-hours. Passenger hot boxes were reduced, but freight hot boxes increased slightly. The percentage of bad-order cars to revenue freight cars on line was kept to a minimum of 2.0 per cent and claim payments on account of defective equipment were the lowest in three years.

To exploit fully the possibility of attracting additional potential passenger business, by offering more attractive, comfortable and better riding equipment, the Milwaukee has replaced the original "Hiawatha" equipment four times with newer and more modern cars.

In the fifth or latest complement of "Hiawatha" equipment, an entirely new arrangement for the steam-jet air-conditioning unit was developed. It is mounted inside the car and comprises a steam-jet unit said to surpass any of the older units of this type, both in economy of operation and convenience for on-the-train servicing.

Other features emphasized are the latest type of automatic heating; decorative treatments to give bright and cheerful exteriors and interiors; comfortable and chummy seating arrangement; public address system; rubber tunnels enclosing the openings between cars; and electro-pneumatic brakes.

Recognizing its responsibility in maintaining its full share of freight cars in the national pool, the Milwaukee has kept pace with present-day requirements, as is clearly shown by the table of car ownership.

This year's new car program includes building 600 class RB refrigerator cars. Materials for this program are now converging on Milwaukee shops, where these cars will be built by the railroad's own forces.

The passenger-car picture on the Milwaukee shows a similar trend, as follows: Ownership as of December 31, 1944, 975; acquired, 1945 to 1949, inclusive, 319; retired, 1945 to 1949, inclusive, 191; net increase in ownership, 128 cars; net ownership as of December 31, 1949, 1,103.

To maintain an economical balance, the Milwaukee has expanded its main shop, at Milwaukee, both through extensive modernization and additions.

A new 14-stall coach repair shop, new truck shop, and new steel fabricating shop constitute the major additions as far as the car department is concerned. The new truck and fabricating-forge shops are equipped with overhead cranes running the full length of both shops.

To provide protected storage for raw material, dies, etc., a new 1,200-ft. covered storage shed, equipped with overhead crane, was built on the west end of the new fabricating shop.

A distinctive feature of the new forge shop is the hinged top portion of the east wall. This portion can be raised horizontally so the traveling crane, operating the full length of the shop, can be moved in and out of the building without interference. This permits storing heavy billets, etc., under a covered shed extension to the east end of the new fabricating shop. The same crane is used for unloading this material from cars.

In modernizing the sheetmetal shop, modern 14-ft., 18-ft. and 20-ft. brakes and 14-ft. shears were provided. One of the latest jobs contemplated for the 18-ft. brake is to punch ninety-three 13/32-in. holes in 12-gage plates in one stroke. This is made possible by a special setup of punches attached to the brake.

The wheel shop at Milwaukee shops was completely revamped, modernized and enlarged. In the modernization the principle of straight-line production was emphasized. Outside storage of the finished product is minimized, since incoming and outgoing procedure is handled on tracks running into the building.

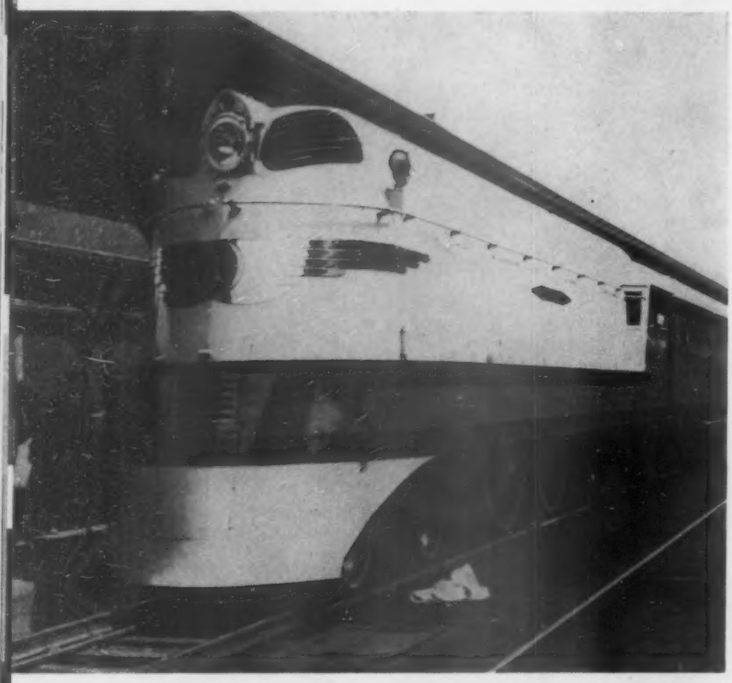
Incoming as well as outgoing mounted wheels are handled by electrically operated, cab-equipped mono-cranes. Wheels are supplied to the various machines by gravity roll wheel racks, the wheels being placed into such racks by the mono-cranes. Axles are handled to and from machines by a conveyor, supplemented by electric hoists on jib cranes at each machine. Car axles are tested and inspected on Magnaflux and Magnaglow machines.

Installation of a mechanical car washing machine, full-length inspection pit, improved drop-pit facilities, increased battery charging equipment, enlarged and modernized battery room, air-conditioning filter-cleaning room, and concrete runways with proper drainage equipment, at its major passenger-car servicing yards are some of the other means Milwaukee has employed to meet the present-day competitive challenge.

MILWAUKEE FREIGHT-CAR OWNERSHIP TREND IN THE LAST FIVE YEARS

Type of car	Ownership as of 12/31/44	Retired 1945 to 1949, incl.	Acquired 1945 to 1949, incl.	Ownership as of 12/31/49
Box	26,588	7,349	6 447	25,686
Automobile	5,626	236	1,000	6,390
Gondola	11,183	6,851	7,150	11,482
Hopper	3,015	9	1,290	4,296
Ballast	999	11	—	988
Stock	3,907	161	—	3,746
Flat	4,647	321	1,000	5,326
Ore	800	—	—	800
Total	56,765	14,938	16,887	58,714

Let the Engineer do the driving!



The original "Twin Cities Hiawatha" on exhibition in the St. Paul Union Station in May, 1935. On a trial run this train attained a maximum sustained speed of 112.5 m.p.h.

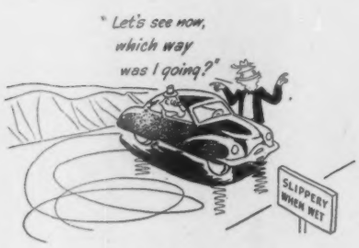
While you relax, the railroad hurries"—the theme of the Milwaukee's current advertising program—typifies the "speedliner" passenger service of the road today. And the Milwaukee is a "hurrying" road that offers high-speed trains and fine equipment for passenger relaxation. The Milwaukee's overland trains, including the "Hiawatha" fleet, are characterized by speed, smooth riding, and distinctive design and appointments. Their comfort stems, in part, from the road's leadership in the development of smooth-riding passenger trucks for use on modern high-speed trains.

The spectacular development of high-speed schedules dates back to 1934, in the very depths of the depression, when trade was bad and the railroad passenger business was awful. At that time a handful of mid-western roads, including the Milwaukee, embarked on a bold experiment with light trains of superior speed, designed to win passengers back to the rails. As a part of these experiments, on July 20, 1934, the Milwaukee ran a regularly scheduled train, composed of four-year-old steam locomotive and five roller-bearing equipped steel cars, on a trial speed run for the 85 miles between Chicago and Milwaukee. This train established what was claimed as a new world record for sustained speed on a revenue passenger run with an average of 92 m.p.h. for 54 miles between Deerfield, Ill., and Lake, Wis.

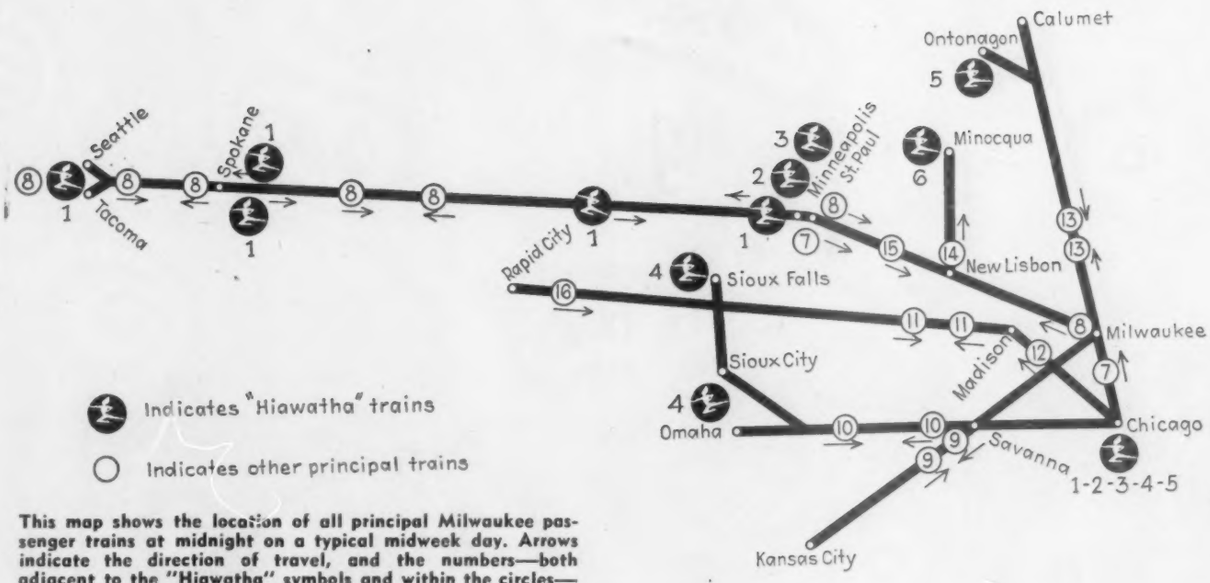
Shortly after, the Milwaukee started building a six-car streamline train for service between Chicago and the Twin Cities. This train, named the "Hiawatha" at the suggestion of two employees, on a preinaugural run attained a sustained speed of 112.5 m.p.h. This caught the imagination of the travelling public, and demonstrated the potentialities of modern high-speed trains. The name was befitting, for Longfellow wrote:

"Swift of foot was Hiawatha;
He could shoot an arrow from him
And run forward with such fleetness
That the arrow fell behind him!"

The first "Hiawatha" entered revenue service on May 29, 1935. In the intervening years this single train has grown to a "Hiawatha" fleet, including a second "Twin Cities Hiawatha," the "Midwest Hiawatha" between Chicago and Omaha-Sioux City-Sioux Falls, the "North



The Milwaukee's passenger service advertising has been directed towards the motorist, employing a pleasant, humorous tone. These illustrations were taken from the booklet "Let the *Engineer* Do the Driving"



This map shows the location of all principal Milwaukee passenger trains at midnight on a typical midweek day. Arrows indicate the direction of travel, and the numbers—both adjacent to the "Hiawatha" symbols and within the circles—are keyed to the list below:

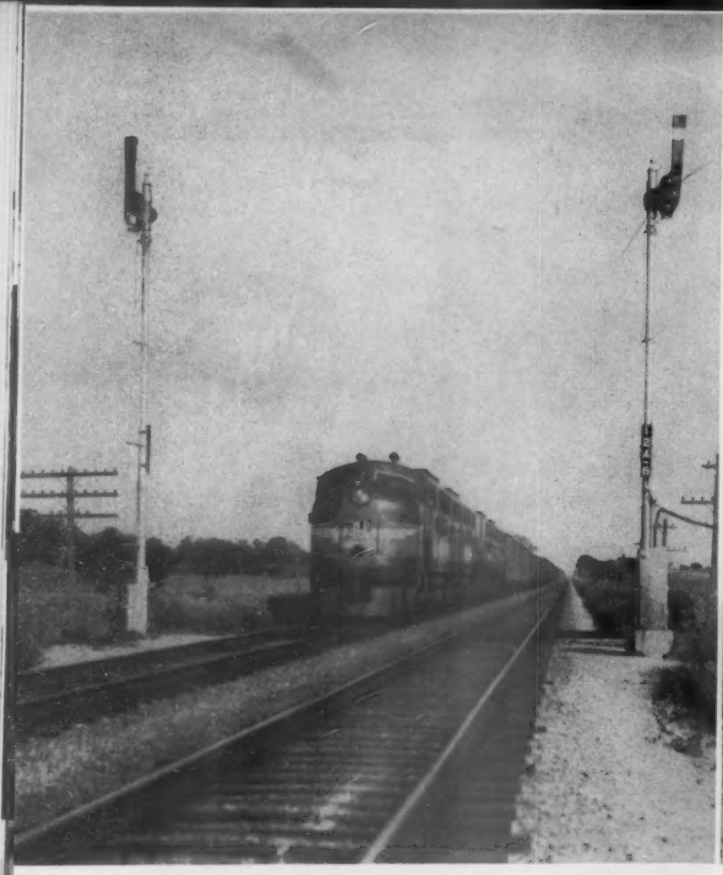
(1) Olympian Hiawatha
(2) Morning Twin Cities Hiawatha
(3) Afternoon Twin Cities Hiawatha
(4) Midwest Hiawatha
(5) Chippewa-Hiawatha
(6) North Woods Hiawatha Service
(7) Pioneer Limited
(8) The Columbian
(9) Southwest Limited
(10) The Arrow
(11) The Sioux
(12) The Minnesota Marquette
(13) Copper Country Limited
(14) The Tomahawk
(15) Fast Mail (No. 56)
(16) Nos. 11-2, Chicago-Rapid City

Woods Hiawatha Service" to the "Land-o'-Lakes" region of Wisconsin, the "Chippewa-Hiawatha" between Chicago and Green Bay, Wis.—Ontonagon, Mich., on the south shore of Lake Superior, and the "Olympian Hiawatha" between Chicago and Seattle-Tacoma and the Pacific northwest. Today the "Hiawatha" fleet includes 16 sets of the most modern passenger equipment.

The "Hiawatha" fleet, in addition to being fast and well equipped, has been carefully scheduled. The times at which these trains arrive and leave the principal sources of traffic coincide with the periods of peak demand, an important factor in the Milwaukee's continued importance in the Chicago and Twin Cities travel market.

The Milwaukee operated its own sleeping cars with its own men from the inception of such accommodations on the property—for a longer period than any other railroad. This independent operation was completely interrupted but once—between 1882 and 1890—by a contract with Pullman. In 1927 a new contract was entered whereby Pullman operates some sleepers on principal trains, but the Milwaukee retains the ownership and operation of all others. Today the road still operates 87 sleeping cars for its own account, with its own personnel and equipment.

The man in the aisle is Dan Healy, probably the most famous dining car steward in the United States, and an integral part of the "Pioneer Limited" from 1899 to 1922. In those days the "Pioneer Limited"—running between Chicago and the Twin Cities—was one of the most heavily patronized trains on the Milwaukee Road. And after the advent of Dan Healy and his famed cuisine, it was always crowded. Dan's car made a round trip between Chicago and Milwaukee daily, leaving Chicago during the dinner hour and returning at breakfast time. (In those days the Chicago-Milwaukee running time was two hours and 15 minutes as compared with today's one hour and 15 minutes for the 85-mile trip.) Dan was given a free hand in planning his own menus, and in purchasing his own ingredients. Moreover, in addition to great culinary skill, he had a prodigious memory, quickly recognizing faces and recalling names. The price of his elaborate dinner was $1, and included second helpings without charge and gift boxes of candies for the ladies. For patrons who entered the car after all seats were taken, there was entertainment with Healey's ready wit, and complimentary appetizers. Dan Healey's passing in 1922 was mourned by travelers the nation over



These semaphores (left) were installed as part of the Milwaukee's 1912 program, involving 2,382 track miles of automatic block signaling, the biggest single project on record. Typical Milwaukee construction (right), using modern searchlight signals at an end of a siding, in dispatcher-controlled territory. The wind-driven generator charges storage batteries to operate the signaling

Signaling on the Milwaukee

Progress in the installation of modern facilities, especially centralized traffic control for train operation by signal indication

In its first 100 years, the Milwaukee pioneered many devices for the control of train movements which since have come to constitute an integral part of railroading. In 1903-04, for example, train movements were so numerous between Chicago and Milwaukee that serious delays were being encountered on this 85 miles of the Milwaukee's double-track main line. In 1905 consideration was given to the construction of a third main track between Chicago and Milwaukee, but the necessary increase in track capacity was secured instead by what was then a new and novel practice. Interlockings—each including two crossovers, one in each direction between the two existing main tracks, and a long siding along each main track—were installed about 12 miles apart.

These interlockings were of the very early all-electric type—which had been developed only a year or so previously. One advantage of the all-electric was that the outlying switches at the far ends of the sidings, about 1 mile from the tower, were interlocked and controlled from the tower. The Milwaukee considers these among the first remotely controlled electrically operated switches. With these universal crossovers and spaced siding layouts, trains were crossed over readily, so that moves could be made in either direction on both tracks, to run faster trains around slower ones, and thus keep all trains moving at a higher average speed rather than, as previously, holding freights too long on sidings to let passenger trains go by. At that time, no automatic block signaling was in service on this division. Train movements were authorized by timetable and train order, a modified type of Form 19 being used so that trains were not required to stop to pick up orders to run left-handed. Thus, at that early date—1905-1906—the Milwaukee was one of the pioneers, not only in the extensive installation of power interlockings including remote control electric switch machines, but also in using interlockings to increase the capacity of double track, rather than adding a third track. Furthermore, the third track has not been added on this territory up to date. The Milwaukee now has 140 interlockings.

This instance is an example of the activities of the Milwaukee in the years 1900 to 1912 in applying interlockings to improve safety and expedite train movements. In 1912, the Milwaukee in one grand effort embarked on

an automatic block signaling program involving 2,382 track miles, said to be the largest signaling project, in miles of track, on record. With the exception of a few short sections already equipped with signaling, or some sections on which the second track was not yet installed, which are excluded from totals, this big project included new automatic block on 655 road miles, between Chicago and Aberdeen, S. D.; and 435 miles, between Elgin, Ill., and Council Bluffs, Iowa.

First Long Color-Light Signal Project

Automatic signal construction was pushed rapidly, in 1915 through 1917, on the principal single-track lines, especially on the route through the mountains to Seattle, Wash. Something new at that time was the use outdoors of color-light signals instead of semaphores. Light signals had been used for years in subways, but long-range color-light signals, with color aspects strong enough to be seen readily in adverse sunlight conditions, were a new practice in 1915 which had been under development only a short time before on the New Haven and some of the other eastern roads. The Milwaukee asserts it was the first railroad to adopt the color-light signal for an extended project. The installation included about 660 miles in Montana, Idaho and Washington, completed in 1920. The Milwaukee now has automatic block on 3,691 miles of track. Also automatic cab signaling, of the continuous inductive type, is in service on 341 miles of road between Chicago and St. Paul.

In the early days, the Milwaukee, as well as several other railroads serving the same territories, built numerous secondary lines. As a result, at many places the Milwaukee crossed other lines at grade. Manually operated mechanical interlockings were installed at many of these crossings, and at the others all trains were required to stop and look for other trains before proceeding across. In order to reduce operating expenses and minimize the number of train stops, the Milwaukee was one of the pioneers in the development of circuits by which the approach of a train initiates the operation of an interlocking at a crossing of two railroads. This form of protection, known as automatic interlocking, was installed by the Milwaukee at four crossings in 1926-27, and such plants are now in service at 38 crossings on the Milwaukee. Where an automatic interlocking replaces a manually controlled plant which required a leverman on each trick, the present-day saving in operating expenses is about $15,000 annually, or 50 to 100 per cent on the investment required for the automatic interlocking.

The Milwaukee was one of the few roads in the United States that had extensive installations of the European staff system by means of which train movements were authorized—not by timetable and train orders—but rather by signal indication, directing the engineman to pick up and carry the staff through to the other end of the block. For the most part, the installations of this staff system were made in 1908-10 on hazardous sections of the Milwaukee through tunnels and mountainous country. These staff installations, which were made primarily to secure a "fool-proof" system of absolute block, also were of benefit in pointing out the merits of authorizing train movements by signal indication.

Pursuing this thought, the Milwaukee, in 1923, installed train operation by signal indication including signals at an intermediate siding, all under control of one office, on 6.1 miles of single track between Delmar, Ill., and Talmadge. This installation, while not then called centralized traffic control, comes within the present definition of that form of signaling and is so classified. Thus, the Milwaukee was among the roads to which credit must accrue for development of train operation by signal indication.

Since its original project in 1923, the Milwaukee has been active in the installation of systems of train operation by signal indication.

The 98-mi. single-track division between Aberdeen, S. D., and Mobridge on the route to Seattle, Wash., handles high-speed through trains, but a comparatively light traffic. In 1946, when deciding the type of signaling to be installed on this division, the Milwaukee adopted train operation by signal indication with signals at sidings controlled by the dispatcher. The switches at the sidings, with the exception of one siding on a grade, are operated by hand-throw stands, the same as before. A similar system was installed in 1947 on 122.5 miles between Mobridge, S. D., and Hettinger, N. D., and between Rhame, N. D., and Marmarth, 14.5 miles. At sidings where no commercial a.c. power is available, the power for charging signaling batteries is furnished by generators which are driven by wind.

Also on several important single-track divisions, such as the line to Kansas City, the Milwaukee has made extensive installations of complete centralized traffic control including power switches and signals at sidings, all under the control of the dispatcher for train operation by signal indication. For example, on an installation of C.T.C. on 51 miles of single track between Laredo, Mo., and Polo, the gross annual saving is $51,649, which represents 21.5 per cent on the investment over and above 3 per cent interest. The Milwaukee now has C.T.C. including power switches and signals for directing train movements on more than 469 miles of road.

Double to Single Track

Studies made on the Milwaukee showed that C.T.C., with power switches and signals at sidings, was effective in increasing track capacity and reducing delays previously occasioned by the train order system. Coupled with the fact that traffic conditions had changed over the years on some lines, this has led the Milwaukee to conclude that present-day traffic, hauled by Diesel locomotives, can be handled efficiently on single track with C.T.C. in some sections where double track was installed years ago and is still in service.

In 1946, about 35.6 miles of second main track on the Hastings & Dakota division was retired, and the remaining single main track was equipped with C.T.C., including power switch machines and signals controlled by the dispatcher. The average traffic includes 6 passenger trains and 6 or 7 freights daily. The cost of the C.T.C. and track changes was about $600,000 and the net saving is $84,288 annually.

A project recently completed involves a change from double track to single track with C.T.C. on 77 miles between Green Island, Iowa, and Marion. The average traffic includes 4 passenger and 10 freight trains daily, which, based on previous experience, can be handled practically as well on single track with C.T.C. as on the previous double track. In this territory, the rail was due for renewal, and the saving made possible by replacing rail on only one track amounts to roughly $1,735,000, the estimated saving in track maintenance being $109,000 annually.

In many ways, the Milwaukee has been, and is being, active in the use of modern signaling, not only as a means for providing safety, but also reducing operating expenses, and expanding the capacity of the railway plant economically by efficient utilization of tracks, locomotives and cars.

RUGGED COUNTRY, RUGGED LADING, RUGGED POWER. When equipment now on order is delivered, about 70 per cent of freight service on the Milwaukee will be rendered by electric drive

A brief resume of some of the things the Milwaukee is doing for shippers

—With the Customer in Mind

Going out after freight traffic is nothing new for the Milwaukee. Anybody who was interested in railroading in the 1920's remembers seeing or reading about its transcontinental runs of raw silk from the Pacific to the East, at speeds faster than passenger trains, designed to cut insurance premiums to the minimum. For their control Milwaukee operating forces used the code word "Surround."

'Surround" is a good symbol word also for the three-day "general staff meeting" held at the call of President Kiley in Chicago this September. The session's purpose was to bring out the "gripes" and problems of both traffic and operating officers; to isolate the impediments to good service; and then to "surround" them with constructive remedies. To the meeting came both off-line and on-line traffic men, division superintendents, division engineers and master mechanics, as well as system and regional staff men. The first day was exclusively the traffic department's—to consider what it needed from the railroad for the customers. The second day brought the traffic and operating groups together, so that the former could put forth their case and the latter air their troubles. On the final day came the operating department's consideration of what needed to be done in transportation, engineering and rolling stock to deliver the goods asked for. Keynoted Mr. Kiley: "We must all be income conscious."

Physical Improvements

A great portion of the nearly $145 million spent in improvements by the Milwaukee in the past five years has a direct and continuing effect on its freight service. Dieselization, for example, has greatly improved on-time performance of freight schedules, as well as cut costs. In these days of car shortages, possession of one of the lowest "bad order" ratios of any large railroad in the country should give the Milwaukee satisfaction that large investments in new and rebuilt freight cars since it came out of reorganization have paid off. Individual projects undertaken in recent years in behalf of shippers are too numerous to cover in their entirety, but even a partial list gives a hint of their range and importance:

New storage yard on Chestnut Street line, Milwaukee
Additional tracks at Bensenville (Chicago) and Pig's Eye Yard, St. Paul
New brick freighthouse at Goose Island, Chicago
Icing and other facilities at Moses Lake, Wash., to handle growing traffic in potatoes
Open wharf at end of Dock No. 1, Tacoma, to replace old oil dock
Extension of dock at Seattle to handle fish oil from ships
Addition to potato warehouse at Mannheim, Ill.
Larger track scales at Everett, Wash.
Enlargement of fruit house at Minneapolis
Development of 53 acres for industrial use along Seattle's East Marginal Way

The biggest single job in recent years affecting the speed of freight movement was the improvement of Bensenville yard, Chicago, to provide classification tracks ample for maximum refinement in preblocking trains to distant terminals and long enough to absorb modern trains. Since the effect of good yards is cumulative, the Bensenville work not only saved time and money in Chicago but in points like Milwaukee and Savanna, Ill., as well.

The Milwaukee has pushed vigorously a system-wide program of improvement for handling merchandise. The oft-heard complaint of shippers that railroads don't tell their customers when they have good things to offer doesn't apply to the Milwaukee, which issues to them—semiannually, on the average—complete summaries of merchandise schedules, showing: (1) service from about

120 on-line stations to Chicago, Milwaukee and the Twin Cities; (2) a list of 53 through package cars from Milwaukee points to break-bulk points on other railroads; (3) a list of 70 regularly-scheduled through cars from connecting railroads to break-bulk stations on the Milwaukee; and (4) separate schedules of outbound through and way cars and truck service, with index of destinations, from each of almost 60 key freight stations on the system. On each schedule it is clearly noted that no change is to be made unless first approved by the assistant to vice-president in charge of merchandise service—"after *joint* recommendation of the superintendent and the traffic department" on the divisions concerned. In addition complete schedules are provided on request of truck service in lieu of rail for merchandise.

In 1942 the Milwaukee received authorization to enter the freight trucking field in direct connection with its rail operations, with the usual restrictions. (It had for some years participated in arrangements for coordinated bus service on lightly patronized passenger routes.) The Milwaukee Motor Transportation was established and started operations in April, 1943. Today, truck service, in lieu of way freight, is operated over 1,567 route-miles, one way, out of terminals at Milwaukee, Plymouth, Green Bay, Portage, La Crosse, Madison, and Janesville, Wis., Channing, Mich., Davenport, Dubuque, Mason City and Marquette, Iowa, and Austin, Minn.

Traffic Development

The Milwaukee's agricultural and mineral development department is one of the oldest in the country. Its geologists have located and surveyed deposits at many points of commercially valuable minerals hitherto unknown—as for example, high-grade bentonite in Montana. Much has been accomplished already in the compilation of a record to cover all known mineral deposits in Milwaukee territory. Agricultural production accounts for about one-quarter of the freight revenues of the Milwaukee, heaviest items being wheat from Minnesota, South Dakota and Montana, cattle "from practically everywhere" and hogs from the corn belt. This department is constantly engaged in educating producers to serve wider and bigger markets and to increase the yield of their properties.

The industrial development and real estate department, with three officers and some 20 employees, gives valuable location aid to industry. From the beginning of 1946 to date, 1,529 new industries have been located on line, with an estimated new traffic created of 177,200 carloads a year. Among them were such "blue chip" shippers as American Can, Continental Can, General Motors, National Tea, Archer-Daniels-Midland and Deere & Co.

The Milwaukee management believes that the men who actually move the freight can do the most about loss and damage bill on the railroads. Operating officers have gone in intensively for on-the-ground meetings—with considerable inconvenience to their comfort and work schedules, but with good effect at the cash register. One terminal superintendent alone, in one month last winter, held 61 combination safety-good handling meetings, some of them starting as early as 6 a.m. He took the meetings to the men—out on the yard leads, on the rip tracks and at the tool houses. In large freight stations over the system there were held, during 1949, a total of 454 damage prevention meetings and, during the first eight months of 1950, 321. Claims paid under account 418 show a decrease in the past three years when related to total freight revenues:

	Claims Paid	% to Revs.
1948	$3.7 million	1.79
1949	3.0 "	1.54
1950 (8 mo.)	1.7 "	1.33

SHIPPING FREIGHT ACROSS THE PACIFIC CALLS FOR A REFINED TOUCH. With a specialized foreign traffic staff—and a full-fledged "oriental traffic manager"—the Milwaukee has it, together with modern transshipment facilities at ports like Tacoma, here pictured

IN BOTH STATIONS AND STORES DEPARTMENTS, the Milwaukee was a pioneer in the use of mechanized equipment. Twenty years ago the railroad was palletizing freight moving over its Seattle docks. Shown here is a large inland freight station

THESE MEN HAVE HEADED THE MILWAUKEE'S ENGINEERING DEPARTMENT . . .

D. J. Whittemore
1863-1910

C. F. Loweth
1910-1935

W. H. Penfield
1935-1945

R. J. Middleton
1945-Dec. 31, 1949

C. T. Jackson
Jan. 1-July 31, 1950

W. G. Powrie
Aug. 1, 1950—

Development of the fixed properties and maintenance practices of the Milwaukee reflect the capabilities and achievements of its top engineering officers

Chief Engineers Set Pace for Progress

Progress in engineering on any railroad is pretty much a reflection of the talents, energy and engineering know-how of its top-ranking engineering officers. So it has been on the Milwaukee, which, it may be further noted, has been fortunate in having at the helm of its engineering department at any given time, during its 100 years of existence, a man specially qualified to deal with the particular phase of railroad engineering progress that required emphasis during his tenure of office. On this road it is a relatively simple matter to identify the engineering progress made with the lives of the chief engineers responsible for it. This is so largely because the road has had only six chief engineers since it came into existence.

While the official history of this railroad began in 1850, with the operation of the first train over the Milwaukee & Mississippi, the Milwaukee system as such came into existence in 1863 when the Milwaukee & St. Paul was formed by the merger of several smaller lines. Don Juan Whittemore was the road's first chief engineer, and since he continued to hold this post until 1910, or 47 years, it is not unlikely that he holds the record on American railroads for length of service as chief engineer of a major line.

During the period that Mr. Whittemore headed its engineering department the Milwaukee grew almost to its present size. For directing this phase of the road's development he was admirably qualified. At the age of 19 he had charge of the construction of a line between Swanton, Vt., and Rouse's Point, N. Y., and in 1857, at the age of 27, he undertook the location of about 250 miles of line for the Southern Minnesota, which later went bankrupt. After a brief stay in Cuba Mr. Whittemore returned to the United States as assistant to the chief engineer of the LaCrosse & Milwaukee, one of the predecessors of the Milwaukee.

His major task, on becoming chief engineer of the Milwaukee, was to direct the rapid expansion of this road, which he saw grow to a system of over 10,000 road miles. Although he had many engineering achievements to his credit the greatest of these undoubtedly was the role he played in the extension of the Milwaukee west from Mobridge, S. D., to the Pacific coast. As part of this work Mr. Whittemore personally conducted reconnaissance surveys through the passes of the Rocky mountains.

One of the first permanent pontoon bridges in the country was constructed under Mr. Whittemore's guidance. It is still in service at Prairie du Chien, Wis., carrying the Milwaukee across the Mississippi river. In the

The Harry S. Truman bridge, carrying the joint Milwaukee-Rock Island line across the Missouri river at Kansas City, Mo., was one of the largest bridge projects in recent years

midst of his railroad work Mr. Whittemore engaged in outside pursuits which led to important developments. For instance he was a pioneer in the study of cement and its uses and was a key figure in the formation of several cement companies. Also, he had a number of inventions to his credit. one of which was the Whittemore switch stand, a number of which are still in service on the Milwaukee. He retired in 1910 and died on July 16, 1916.

Loweth Becomes Second Chief

While the road continued to grow after Mr. Whittemore's retirement the next phase of its development was characterized primarily by the extensive improvement of the lines and properties already built to increase their capacity to carry traffic and to accommodate them to the heavier locomotives that were coming into use. Appointed to succeed Mr. Whittemore and to direct this important work was Charles Frederick Loweth. Even before entering the service of the Milwaukee Mr. Loweth had behind him a long and distinguished record as an engineer, which had its beginnings in 1875. During this period he served in important engineering capacities, either directly or as a consultant, with various roads, bridge builders and municipalities. Many important engineering structures, including two railroad bridges across the Mississippi river, were designed and built by Mr. Loweth during this phase of his career.

On joining the Milwaukee in 1901 he was given the title of engineer and superintendent of bridges and buildings. One of his responsibilities in this capacity was to design and replace for heavier loading the bridges across all the more important rivers on the older parts of the system, as well as to design and build the new structures for the westward extension from Mobridge to the Pacific coast.

After Mr. Loweth became chief engineer in 1910 a great variety of important improvements were designed and executed under his direction, including new lines, grade reductions, line relocations, double trackings and large-scale grade separations. Grading work done in 1912 alone in connection with double-tracking projects involved the movement of earth in quantities comparable in volume to those required by the excavation of the Panama Canal. Also done under his supervision was masonry construction and bridge erection work on which more than 2,000 men were employed. Mr. Loweth was a pioneer in applying concrete slabs on bridges carrying tracks across highways, and also inaugurated the use of concrete ballast-deck floors on bridges. He continued to serve the road as chief engineer until his death, at the age of 78, on May 15, 1935, after nearly 25 years in that capacity.

Beginning somewhat before Mr. Loweth's death and continuing to the present time, engineering developments on the Milwaukee, as on other progressive roads, have been characterized primarily by the refinement of practices to get greater efficiency and to keep pace with the developments in rolling stock. There have been four chief engineers during this period—William Henry Penfield, who succeeded Mr. Loweth in 1935, and retired on November 15, 1945; Robert James Middleton, who served from 1945 until his appointment as consulting engineer on December 31, 1949*; Charles Thomas Jackson, who held the position from January 1, 1950, until he retired under the road's compulsory retirement plan on July 31; and the present incumbent, William George Powrie, who succeeded Mr. Jackson.

Before being appointed chief engineer in 1935 Mr. Penfield had a record of 36 years of service in the engineering department of the Milwaukee, during which period his activities embraced every phase of railway engineering—location, construction, and maintenance. He held the position of engineer maintenace of way from 1913 until the time he became chief engineer.

A development that occurred during Mr. Penfield's regime, which had an important bearing on the activities of the engineering and maintenance departments, was the introduction of streamline passenger trains, the "Hiawathas," the first train of this name being placed in service on May 29, 1935, between Chicago and the Twin Cities. This train was followed into service by the "Morning Hiawatha" on January 21, 1939, and on December 11, 1940, the "Midwest Hiawatha" was put into service between Chicago and Omaha, with connections to Sioux City, Iowa, and Sioux Falls.

The faster schedules maintained by these trains brought about the necessity for extensive improvements in the track structure, as well as bridges. Under Mr. Penfield's direction large-scale curve reduction work, and ballasting and rail-relaying programs were carried out, and many main-line bridges were strengthened to ready the line for the high-speed trains. These improvements were also made necessary in part by the acquisition of larger and heavier freight locomotives. Under his guidance a large mileage of double-track line was reduced to single track by the removal of one track and installation of centralized traffic control to give the required capacity.

An Authority on Maintenance

Mr. Penfield was recognized as one of the country's foremost authorities on railroad maintenance, Under his direction large specialized extra gangs were organized for doing certain types of track-maintenance work, such as rail relaying and ballasting, which had formerly been carried out by relatively small gangs. Similarly, system bridge and building and concrete crews were organized, and these along with the large specialized track gangs,

*Mr. Middleton retired on July 31, 1950.

The Milwaukee was a pioneer in the use of large specialized gangs for carrying out various types of heavy track-maintenance work

carried out their activities in accordance with schedules prepared under the direction of Mr. Penfield. He experimented extensively with new maintenance materials and methods and was a pioneer in the use of the heavier rail sections.

Like his immediate predecessor, Mr. Middleton had a long period of service with the Milwaukee prior to becoming chief engineer, having started with the road in 1906. The positions he held included those of assistant engineer in charge of the construction of important improvement projects, valuation engineer, assistant chief engineer, with headquarters at Seattle, Wash., and assistant chief engineer of the system.

Middleton Gets Diesel Problem

One of the most important developments that had a bearing on the engineering activities of the road during Mr. Middleton's tenure of office as chief engineer was the accelerated acquisition of Diesel power that occurred during that period, which is expected ultimately to result in the road's complete Dieselization. The engineering department was faced with the problem of providing facilities for the maintenance and servicing of the Diesels. Under Mr. Middleton's direction large Diesel-servicing buildings were designed and erected at Milwaukee, Wis., Chicago, Bensenville, Ill., and Tacoma, Wash.

During the five years in which Mr. Middleton headed the engineering department, the road spent approximately $47,000,000 for improvements chargeable to capital accounts, including new and heavier rail, the strengthening of bridges, and Diesel repair and servicing facilities. He handled negotiations in connection with the construction of the Harry S. Truman bridge which carries the joint Milwaukee-Rock Island line over the Missouri river at Kansas City, Mo., and he also supervised the rearrangement and enlargement of the road's receiving and classification yards at Bensenville and Milwaukee. Moreover, incident to the placing in service of the "Olympian Hiawatha" between Chicago and Seattle-Tacoma, Wash., on June 29, 1947, much work was necessary in preparing the line from Minneapolis to the west coast for this train, which included extensive line changes, new and heavier rail, bank restoration, road stabilization and curve reduction. Mr. Middleton was possessed of particular ability for astute negotiation with public bodies in connection with improvements involving railroad property, with the result that he was able to minimize the railroad's participation in the cost of such work.

Mr. Jackson's record of service with the Milwaukee extended over a span of 47 years. Much of his early experience had to do with the locating and construction of lines in the western part of the country. In 1919 he came to Chicago as district engineer, being advanced to assistant chief engineer in 1939 and assistant chief engineer, system, in 1947. As noted, he became chief engineer on January 1, 1950, succeeding Mr. Middleton. Previously he had largely assumed the responsibilities of Mr. Penfield insofar as they were concerned with the direction of the road's maintenance activities.

The largest improvement project undertaken on the Milwaukee during the seven months that Mr. Jackson served as chief engineer was the enlargement and rearrangement of the receiving and classification yards at Savanna, Ill. Both eastbound and westbound yards were extended about 2,000 ft., additional tracks were constructed and new ladder tracks at the west end of the westbound yard were provided. The entire project, which included the construction of 22.4 miles of track and 133 turnouts, the shifting and relocating of 6.2 miles of track, the removal of 4.8 miles of track and 104 turnouts, grading work and preliminary work, was done in a period of approximately four months.

Powrie Youngest Chief Engineer

Being 46 years of age at the time he became chief engineer, Mr. Powrie has the distinction of being the youngest chief engineer that the Milwaukee has had, with the exception of Mr. Whittemore. Another aspect of Mr. Powrie's career worthy of mention is the fact that his experience has been largely in connection with maintenance activities. This emphasis on training and experience in maintenance work in the selection of a chief engineer is a reflection of the fact that, while much remains to be done in the improvement of railway properties, the greatest problem today is the adoption of policies that will reduce to a minimum the cost of maintaining the tracks and structures.

For all practical purposes Mr. Powrie entered the service of the Milwaukee in 1923 as a chainman, serving subsequently as rodman, instrumentman, assistant engineer, assistant to general supervisor bridges and buildings, and division engineer. In 1932 he was appointed assistant engineer water service, serving also as assistant superintendent of track maintenance from 1937 to 1941. He became engineer maintenance of way in 1941 and assistant chief engineer, system, on January 1, 1950. With its engineering department headed by a youthful, aggressive man, trained to deal with the special problems confronting railway engineering departments today, and backed by a staff of equally qualified engineers, both in the headquarters' office and out on the line, there is every assurance that the supervision of engineering activities on the Milwaukee, at the beginning of its second 100 years of existence, is in good hands.

Passenger Heads Look Both Ways

With a watchful eye toward an impending expansion of military traffic, passenger traffic officers meet at Chicago to find ways of capturing more public patronage

Above—Retiring Association President C. E. Bell, general passenger traffic manager of the Seaboard Air Line, turns the gavel over to incoming president E. J. Goebel, executive vice-president and passenger traffic manager of the Chicago, Duluth & Georgian Bay Transit Co. Right—Officers for the new term—(left to right), E. J. Goebel, president; E. G. Baker (general traffic manager, St. Louis-San Francisco), vice-president; J. F. Whittington, (general passenger traffic manager, Baltimore & Ohio), chairman of the executive committee; B. D. Branch, (general passenger agent, retired, Central of New Jersey), secretary

Fully aware that a single "incident" or military crisis could indefinitely shelve much of their planning, members of the American Association of Passenger Traffic Officers gathered at the Stevens Hotel in Chicago on October 23 and 24 to prepare for any traffic eventuality.

On the side of peacetime passenger travel, they heard G. A. Kelly, vice-president of the Pullman Company, tell of advertising's role in traffic development, and Ian Warren, passenger traffic manager of the Canadian Pacific, of ways to develop and promote passenger business. On the side of wartime travel, they heard from F. H. Dunlevy, assistant deputy director, Military Traffic Service, U. S. Department of Defense. The story of Intelex—an automatic space reservation system—was told by J. S. Jammer, vice-president of the International Standard Trading Corporation, and the new, simplified book-type interline ticket was reported on by Harry Sengstacken, passenger traffic manager of the Chicago, Milwaukee, St. Paul & Pacific.

"The passenger business is the show window of railroad's operation," said L. R. Powell, president of the Seaboard Air Line, the initial speaker of the two-day program. Conditions beyond the railroad's control, he said, have tended to price them out of the passenger market.

They must now work to build passenger revenues without raising operating expenses and this cannot be done merely by laying railroad services "on the counter." Success is essential, as a good passenger service is highly important in building up the good will of the public toward the industry.

Passengers Essential to Survival

"The survival of the railroads under private ownership and operation depends ultimately," Mr. Kelly told the group, "upon the good will and favorable opinion of the public at large. While freight operations provide the large percentage of revenues, those of us who are concerned with the passenger services have a great and inescapable responsibility in preserving the free enterprise of the railroads. For public attitudes, impressions and opinions derive primarily from the passenger services and all the elements which enter into the mode

"Why wasn't this thought of before?" Comments from passengers, ticket sellers, train conductors and travel agency personnel indicate wholehearted approval of the experimental book-type interline ticket

and manner of conducting these services. It is essential to survival that these services be conducted and maintained at the highest possible levels and that there be an unceasing search to find ways and methods of continually making them better.

"But that is not all. We must also continue to inform and educate the public through every available channel that the railroad passenger services are finer, better, safer and more dependable than any other agency of transportation. Advertising, merchandising and promotional activities will inform the public about the services —but essentially, by our manner of performance, we will persuade and convince the public that we deserve survival, and the public, by its support and patronage, will be our champions in that accomplishment."

Mr. Kelly said that the current advertising campaign of the Pullman Company is of a dual character—institutional and promotional. "It is believed that by incorporating in our advertisements, by word and picture, specific evidence of constant progress and improvements in equipment, design and service standards, we build a public conviction that our industry is an enterprising and essential part of American life. We believe that as we build such a conviction, we also create and promote patronage and use of our facilities and service.

"Service is the principal thing which the railroads offer, or have to sell to the public. If the service is good, if it meets with public favor and approval, then we will have sound or good relations with the public. Whether we have this good service depends largely on whether we have good intentions; whether we really want and desire to serve the public adequately and well. A great many of us think we have such good intentions, but it is very easy to become complacent and self-satisfied with the manner of performance of our individual tasks. Perhaps what we need to do is some self soul-searching, to sincerely and conscientiously examine our own consciences, to determine for ourselves if we are really doing our individual jobs as well as they can be done."

Traffic in Competitor's Back Yard

There are many fields of passenger travel open to development by the railroads—some of them right in the back yards of competitors, said Mr. Warren. Because of the five-day work week, and the widespread increase of retirement and pension plans, there is a far greater travel market open to the railroads than there was during the pre-World War II era.

One of the greatest sources of railroad travel, Mr. Warren pointed out, is the private motor car owner. He can be "sold" on avoiding the tedium of long drives, as well as the consternation of short trips in congested areas, by using rail services. Bus travel, he said, is primarily of a short-haul nature, and the inroads made by this vehicle may stabilize shortly as the bus industry experiences increased costs of operation. Because of its great advantage in speed, the airplane has created a large part of its own travel market. It has detracted little, for example, from the railroads' tourist traffic and in some cases—specifically, the trans-ocean services—it has actually promoted rail travel among those who wish to "see" this country while they are visiting.

Despite competitive agencies, which do not have to be so "cost conscious," the railroads have a good product in their passenger services. What is needed to put the product over, Mr. Warren said, is a properly selected and trained sales force, one that exhibits the desire both to seek out business and to aid the passenger. A good salesman, Mr. Warren said, can make the passenger want to expand his initial plans with, perhaps, a circle tour instead of a direct round-trip, or a larger Pullman accommodation than that originally selected. Local agents, he pointed out, are frequently untrained in this art, as passenger sales constitute only a small portion of their daily duties. In answer to this, the Canadian Pacific, he said, is currently undertaking a sales training program which is designed to reach the entire selling force with these ideas.

Prospective patrons, he continued, must know, automatically, of the service the railroad offers. This must be done through carefully planned advertising. Once aboard his train, a passenger must be so favorably impressed with the service he receives as to want to repeat his trip by rail when the next occasion arises. And he must want to tell his friends about it. New trains alone do not acomplish this. The personal aspects of the service are equally important, and every railroad officer and employee must be constantly alert to this fact. Much more than the present effort is called for. Complaints are an unnecessary expense and because the railroad passenger contacts many more employees

during the course of his trip than does the bus or airline passenger, the risk of spoiling a good impression is proportionately greater. The high initial cost of securing a patron is such that most railroads cannot afford to replace him. A successfully promoted passenger service, Mr. Warren concluded, is an important complement to a railroad's freight service, for the public will look for good freight service where it has found a good passenger service.

Pullmans for the Military

Assistant Deputy Director F. H. Dunlevy of the U. S. Department of Defense's Military Traffic Service said that, while there are as yet no fixed concepts regarding passenger transportation under full-scale war conditions, the department was "well aware" of the important services performed by America's railroads during World War II. "We hope, in the near future," he said, "to find an answer to the question of the serviceable, but obsolete, surplus sleeping cars which are currently slated for the scrap pile."

"Public Must Be Told"

Of the many problems that America's railroads face, few, if any, would be solved by government ownership and operation, J. G. Lyne, editor of *Railway Age*, told the group. The railroads must seek the aid of the general public through promoting a better comprehension of specific problems. "Red ink trains," he pointed out, "are often withdrawn from service only after great difficulty and expense. But through the use of publicity and advertising, much of the blind public opposition to such changes could be overcome. The same thing is true of the necessary, but burdensome and unrewarding commuter services. By a carefully planned program of public enlightenment it might be possible to place these services on a tax-reduced, or even tax-exempt basis similar to the numerous local transit 'authorities' which are now operating in metropolitan areas."

Railroad employees, as well as the general public, must be informed of the economic waste wrought by featherbedding. Those who are afflicted by the "full crew virus," he said, should take a good long look at an air line hostess in action.

"I am optimistic about the future of the railroad industry," he concluded, "and I am optimistic about the future of the railroads' passenger business. If the nation's railroads were (down and out) today, a far greater segment of America than is represented by its immediate railroad (family), would be the losers. The railroads must keep the public informed of the regulatory changes that the industry needs and proclaim the importance of these changes to the public's own welfare."

Terming the railroads' space reservation problem a "Frankenstein monster" when compared with that of the air lines, J. S. Jammer, vice-president of the International Standard Trading Corporation (associated with International Telephone & Telegraph), said that, in mechanizing a railroad's reservation procedure, it was necessary to select only that electronic and mechanical equipment which has been proved by service to be absolutely reliable.

Mr. Jammer described the studies made in collaboration with the Pennsylvania prior to making the pilot installation of the "Intelex" system in that road's New York station. The time-consuming phases of manual reservation procedure were carefully tabulated, he said, and as a result, the entire pattern of operation was rearranged and mechanized to provide greater speed, accuracy and economy. Good public relations too, he concluded, result from the efficiency and accuracy with which the requests from the public can be handled. (A description of Intelex, appeared in *Railway Age* of July 8, page 36.)

Book Ticket a Success

Tests of the book-type, six-coupon interline ticket have shown it to be highly successful, Harry Sengstacken, passenger traffic manager of the Milwaukee, told the passenger men. Devised by traffic officers of the Milwaukee, the Missouri-Kansas-Texas and the Union Pacific in conjunction with accounting officers of the Atchison, Topeka & Santa Fe, the Chicago, Rock Island & Pacific and the Illinois Central, the new type of ticket was based on an extensive study of all varieties of tickets employed by surface and air carriers. On behalf of the railroad industry, the Milwaukee had 2,000 tickets made up for tests at selected on-line points over a two-month period. The results of these tests have not been completely tabulated as yet, Mr. Sengstacken said, but it is obvious that the advantages more than offset the disadvantages. Comments from patrons and employees can pretty well be summed up in the words "why wasn't this thought of before?"

Because the form is similar to a type of ticket already used by air lines Mr. Sengstacken said that there would be no problem in getting printers to make it up. One of its great advantages is the fact that the seller executes only the top page, or agent's stub, to complete the entire ticket. "I need not tell you what that means to the seller and the passenger when there is a line at the ticket window."

Its other advantages are that the passenger always gets a receipt which fully details his purchase, the ticket is handier for passengers to keep in purse or wallet; and refunding procedure can be greatly simplified through its use. The American Association of Railroad Ticket Agents have urged its adoption at an early date, he said, and he quoted from some of the enthusiastic testimony from ticket sellers, train conductors, travel agency personnel and passengers who took part in the test.

The cost of printing the tickets for the test was high, he said, but volume purchases, plus mass precarbonizing of the coupon backs by the paper supplier, could bring the cost down very nearly to the level of the present strip-type ticket. He said also that the ticket could be produced in modified forms to provide a larger number of coupons for either one-way or round-trip use.

WHY THE MILWAUKEE WAS BUILT

"It may be laid down as a general maxim, that whatever facilitates and cheapens intercourse among men, in all their pursuits of business, must be to each and to all beneficial. It is beneficial to the producer, especially to the farmer and the miner, for the price of his commodity will be enhanced in value, to the same extent that the cost of transportation is diminished. To the consumer it is beneficial, for the commodities, which he is compelled to purchase from a foreign market, come to him charged with less expense, as facilities are increased and transportation reduced. These propositions . . . are so obvious that every reflecting mind will readily embrace them."

—From an address on April 12, 1848, by Byron Kilbourn, mayor of Milwaukee and president of the Milwaukee & Mississippi Rail Road Company

Communications . . .

The Railroad Inspector

PHILADELPHIA, PA.

TO THE EDITOR:

Your editorial "Is the Railroad Inspector Necessary?" in the September 9 issue deserves comment. It appears to me that the author could not have had a great deal of experience in purchasing locomotives and cars.

Human nature being what it is, I consider expense of placing a competent inspector in a builder's plant to follow up a locomotive or car as it is built to be well worth the money. The pride of craftsmanship that was common 25 years ago has largely disappeared. The presence of the conscientious inspector is like the traffic policeman at a crossing; people just do not take chances running the lights.

The inspector need not be "an expert on every part of a car or locomotive" to be efficient. But he should know an acceptable job when he sees one, and it is my experience that he does.

The good inspector will not accept careless workmanship such as poorly driven rivets, welds of less strength than the builder's designs call for, pipes and pipe unions inaccessible for repairs, parts located where they will chafe and wear out soon after delivery, compliance with safety appliance standards that competent builders sometimes trip up on, and the many items that turn up when a locomotive or car is put together that are not apparent on the drawing board. Our experience is that the railroad inspector finds these things, has them corrected on the spot with a minimum of friction, and in many cases is a help to the design engineers who want to turn out a job but whose attention would not be called to improper designs and assembly except by an outside party, in this case the inspector. To correct improper work after delivery is far more expensive and annoying than to have it done in the builder's plant. I have never known output to be delayed by an inspector except for a very real cause that the builder and purchaser were both agreed should be corrected. Such cases, in my experience, are extremely rare.

I think the parallel drawn between a locomotive or car and a fleet of trucks is a little far-fetched. The highway truck is quite simple by comparison. The investment in the truck is a small fraction of the cost of a locomotive or passenger car, but not, of course, the freight car. The locomotive or car must run for 20 or 30 years with a minimum of maintenance if it is going to be a profitable investment, not run for five years or so and then be turned in on a trade-in or scrapped. The competition in the automotive field is an excellent policeman in itself; no truck manufacturer can afford to have it said that his product had to have a lot of work done on it when delivered or that it is difficult to keep running.

C. K. STEINS,
Mechanical engineer, Pennsylvania

R. F. & T. E. A. Challenge

BALTIMORE, MD.

TO THE EDITOR:

I was interested in the editorial on Mechanical Association Meetings in the *Railway Age* of September 2, including the following paragraph: "The Railway Fuel and Traveling Engineers' Association is faced with a real challenge. Is there no longer any need for fuel economy on steam locomotives? Have all the mutual problems pertaining to the training of locomotive crews, and the selection and training of road supervisors been so completely solved that there is no further need of this association?"

As president of this association for the past year, I can hardly let this pass. The questions are pertinent ones. There is need for increased effort toward economical use of fuel on steam locomotives. A glance at the record will bear that out. Several hundred million dollars were spent last year by the railroads for locomotive coal. It is still being spent, and there is a possibility that even more may be spent in the future, depending on world events.

The Railway Fuel and Traveling Engineers' Association is, as its name indicates, primarily for traveling engineers and road foremen of engines, a road supervisory department organization, as well as a highly educational and informative medium for other railroad men not in the road supervisory category who are keenly interested in fuel economy as well as efficient operation. It coordinates almost every activity that has to do with the use of fuel, coal or oil, and the operation of locomotives, steam or Diesel.

The traveling engineer has many duties in addition to his responsibility for fuel economy. He is responsible for the training of firemen and their promotion, the training of young engineers in train handling, air-brake handling and in observance of rules, operating and safety. Exchange of ideas and opinions at conventions concerning the many interests of traveling engineers and road foremen broadens their experience, vision and capabilities. I would say that the R.F.&T.E.A. has a vital duty and part in the education and training of road supervisors.

The annual meeting at Chicago in September demonstrated the need for this association. There was a large registration, a large attendance, and keen interest in subjects presented. In fact, the attendance at sessions throughout the convention was greater than any that I can recall in recent years. It is interesting that our association was the only one to hold six sessions in the three days.

We had, in fact, too many subjects for full handling, which was brought about by a late decision to reduce the convention time from four to three days. It was necessary in some instances to close "on the floor" discussions in order to keep on schedule. In addition to the listed subjects, we had prominent railroad officers address the association. It was brought out that the responsibilities of traveling engineers or road foremen of engines are more exacting and important now than ever before. During the next few years the railroads will retire many of their engineers, and the supervision is constantly changing. This in itself should justify the existence of the association.

The R.F.&T.E.A. was organized over fifty years ago. It has been responsible for many economies developed in the operation of steam locomotives and I have no doubt that, with the transition from steam to Diesel power, new and interesting problems will present themselves for solution. I do not know what prompted the editorial comment, but believe all will agree that this association still has an important part in the economical and efficient operation of American railroads.

W. E. SAMPLE,
Superintendent of Fuel Conservation, Baltimore & Ohio
Past President, Railway Fuel and Traveling Engineers' Association

[The paragraph quoted, which raised three questions with self-evident answers, was intended not as criticism but to stimulate further constructive activity in fuel conservation and improved locomotive performance. The association has contributed notably to these two objectives over the years as regards steam power and, in view of the substantial number of steam locomotives still in service, this work obviously should be continued. It is equally evident that locomotive crews and road supervisors need every bit of help they can get in operating the new Diesel power more efficiently, and the association has not begun to tap the possibilities of its usefulness along this line. As an educational and inspirational agency for locomotive operating personnel the Railway Fuel and Traveling Engineers' Association is second to none. It deserves the full encouragement and support of higher railway officers both for past achievements and future potentials.—EDITOR.]

GENERAL NEWS

Net Income for First Nine Months of 1950 Totals $465 Million, 66 Per Cent Above 1949

Larger gross revenues, plus careful control of expenses, produce net railway operating income, through September, of $679.9 million

Class I railroads in the first nine months of 1950 had an estimated net income, after interest and rentals, of $465,000,000, compared with $279,000,000 in the corresponding period of 1949, according to the Bureau of Railway Economics of the Association of American Railroads. The nine-months' net railway operating income, before interest and rentals, was $679,891,523, compared with $495,519,350.

Estimated results for September showed a net income of $99,000,000, compared with $38,700,000 for September, 1949. Net railway operating income for the 1950 month was $122,622,393, while in September, 1949, it was $63,483,990. In the 12 months ended with September, the rate of return averaged 3.63 per cent, compared with 3.2 per cent for the 12 months ended with September, 1949.

Gross in the nine months of 1950 amounted to $6,757,696,350, compared with $6,508,099,735 in the same period of 1949, an increase of 3.8 per cent. Operating expenses amounted to $5,160,220,452, compared with $5,254,007,079, a decrease of 1.8 per cent.

Eastern Results

Eighteen Class I roads failed to earn interest and rentals in the first nine months of 1950, of which nine were in the Eastern district, two in the Southern region, and seven in the Western district.

Class I roads in the Eastern district in September had an estimated net income of $33,000,000 compared with $700,000 in September, 1949. In the nine months, their estimated net income was $170,000,000 compared with $86,000,000 in the same period of 1949.

Their net railway operating income in September amounted to $43,203,278 compared with $14,800,858 in September, 1949. Those same roads in the nine months had a net railway operating income of $279,868,374 compared with $207,692,826 in the same period of 1949.

Gross in the Eastern district in the nine months totaled $3,009,849,001, an increase of 2.9 per cent compared with the same period of 1949. Operating expenses totaled $2,366,293,323, a decrease of 1.6 per cent.

South and West

Class I roads in the Southern region in September had an estimated net income of $12,000,000 compared with $4,000,000 in September, 1949. In the nine months, their estimated net income was $72,000,000 compared with $41,000,000 in the same period of 1949.

Those same roads in September had a net railway operating income amounting to $13,510,794 compared with $7,659,391 in September, 1949. Their net railway operating income in the nine months amounted to $103,984,025 compared with $74,248,909 in the same period of 1949.

Gross in the Southern region in the nine months totaled $939,811,222, an increase of 5.8 per cent compared with the same period of 1949, while operating expenses totaled $710,567,267, a decrease of 0.9 per cent.

Class I roads in the Western district in September had an estimated net income of $54,000,000 compared with $34,000,000 in September, 1949. Their estimated net income in the nine months was $223,000,000 compared with $152,000,000 in the same period of 1949.

Their net railway operating income in September amounted to $65,908,321 compared with $41,013,741 in September, 1949. Those same roads in the nine months had a net railway operating income of $296,039,124 compared with $213,577,615 in the same period of 1949.

Gross in the Western district in the nine months totaled $2,808,036,127, an increase of 4.2 per cent compared with the same period of 1949, while operating expenses totaled $2,083,359,862, a decrease of 2.3 per cent.

CLASS I RAILROADS—UNITED STATES

	1950	1949
Month of September		
Total operating revenues	$ 872,032,232	$ 695,310,779
Total operating expenses	600,697,481	541,220,268
Operating ratio—per cent	68.88	77.84
Taxes	133,245,141	75,548,840
Net railway operating income	122,622,393	63,483,990
(Earnings before charges)		
Net income, after charges (estimated)	99,000,000	38,700,000
Nine Months Ended September 30, 1950		
Total operating revenues	$6,757,696,350	$6,508,099,735
Total operating expenses	5,160,220,452	5,254,007,079
Operating ratio—per cent	76.36	80.73
Taxes	783,694,146	634,647,033
Net railway operating income	679,891,523	495,519,350
(Earnings before charges)		
Net income, after charges (estimated)	465,000,000	279,000,000

Would Cut Work Month Of Pullman Conductors

Emergency board rejects other costly demands of the O.R.C.

An emergency board has submitted to President Truman a report recommending that the basic work month of Pullman conductors be reduced from 225 hours to 210 hours, without change in the existing monthly wage rates. The result would be an increase of from 10 to 11 cents in the conductors' hourly rates, which are derived from the monthly rates for use in making payments for overtime and various kinds of special services.

Acceptance of the recommendation would increase the Pullman Company's costs by $430,844 per year, requiring employment of 94 additional conductors, according to estimates in the report. This issue of the basic month was but one of 69 involved in the case before the board, which consisted of Chairman Ernest M. Tipton, I. L. Sharfman, and Angus Munro. The controversy arose in September, 1949, when the Order of Railway Conductors served on Pullman demands for 34 changes in working rules, i.e., for a comprehensive revision of the agreement under which Pullman conductors work. The other 35 issues involve Pullman's counterdemands for a different set of rules changes.

Want Pay for Sleeping

In addition to favoring the change in the basic month, the board made a few other recommendations, principally with respect to procedures for handling grievances; but, as to most of the issues, it advised the parties to resolve them by withdrawing the proposals involved. Thus, the O.R.C. is called upon to withdraw demands, the meeting of which would cost Pullman nearly $5,000,000 a year. That figure was derived from a table in the report, which listed the more expensive proposals and the estimated annual cost in each case as follows: Allowance for away-from-home expenses, $1,385,163; pay for sleep periods, $1,199,190; new arrangements for guarding cars, $710,410; limitation

on number of cars per conductor, $580,-881.

While Pullman porters are not involved in the present case, the board said that some of the conductors' proposals would be applicable also to porters; and that the cost of extending such proposals to the porters would be another $10,844,269 per year. As to these financial implications, the board reviewed evidence pointing up the unprofitableness of Pullman operations, and the decline in business since 1945. Here were figures showing that the average number of Pullman conductors in service in 1949 was 1,836, as compared with 2,761 in 1945.

The board's comment on this showing included advice to the effect that Pullman and O.R.C. "have a common interest in maintaining a healthy and self-sustaining sleeping-car industry." The report added that "there is an unavoidable relationship between Pullman operating costs and charges for Pullman service, and, particularly under prevailing competitive pressures, between charges for the service and the magnitude of its use."

Meanwhile the report had expressed the board's view that the parties' failure to settle most of the issues in collective bargaining was evidence of "a definitely unhealthy aspect of labor relations between the company and the organization." The parties did not respond to the board's suggestion that some of the issues be withdrawn—even though it was "made clear," as the report put it, "that this board would not undertake the impossible task of writing for them a virtually complete agreement of . . . extensive and complicated character."

Contract "Complicated"

"Both parties concede," the report also said, "that the agreement between this carrier and its conductors is one of the most elaborate, complicated, and technical contracts in the entire field of railroad labor relations; and it is clear that the numerous changes proposed . . . are calculated in the aggregate, not to simplify the working rules, but to render them even more complex and difficult to apply. It is doubtful whether any considerable number of persons, aside from the two principal witnesses (A. G. Wise and F. J. Boeckelman), understand the full import of the numerous existing and proposed rules.

"In these circumstances it is unquestionably of vital interest to both parties that they work out such rules between themselves. From the beginning of the hearings, therefore, it was obvious that, aside from a small number of major issues, this is not the type of dispute that should be submitted for findings and recommendations to an emergency board necessarily composed of persons outside the industry and without long experience in the actual application of such intricate rules."

The dispute went to the emergency board after the O.R.C. had called a strike for July 11. The call was cancelled after President Truman issued his July 6 executive order creating the board. While the Railway Labor Act calls for a report within 30 days, the parties agreed to an extension until November 3, the day on which the report was submitted. Public hearings in the case extended over a six-weeks period, from July 17 to August 25.

TOUTED BY A MINIATURE BILLBOARD on a theme popularized by the Southern Pacific, the "Oakland Acorn Express" has developed an enviable volume of passenger traffic among children and grown-ups of Oakland, Cal. There is even a miniature board of directors—composed of boy and girl scouts and others—who meet regularly to consider management problems. Patterned after the S.P.'s "Daylight," the two-ton live steam locomotive hauls passengers over a 1,500-ft. scenic line along the shore of Lake Merritt in Oakland. Plans for an extensive exhibit of railroad devices near the line's "ticket office" are being considered

Mail-Pay Agreement Submitted to I.C.C.

The railroads and the Post Office Department this week submitted to the Interstate Commerce Commission their joint stipulation for settling the mail-pay case. The agreement, already approved by both parties, was submitted at a public hearing before Commissioner Mitchell and Examiner Mullen.

As outlined in *Railway Age* of September 30, page 42, the stipulation would give the roads about $150 million additional for handling mail during the period between February 19, 1947, and December 31, 1950. It also contains provisions for a new rate structure for setting future rates, including the elimination of payments for the return of empty cars, and separation of line-haul and terminal charges.

After the joint agreement was filed, the railroads, and then the Post Office Department, entered various statements and exhibits into the record. This filing of evidence was necessary to give the commission a basis upon which it could make its finding of approval, or disapproval, of the stipulation. These submissions, both railroad and post office, are based on cost studies that have been made during the time this case has been pending before the commission.

While the primary purpose of entering the statements and exhibits at this time was to give the commission a basis for acting on the proposed settlement, it was also understood that witnesses of both parties would be subject to cross-examination on their respective statements at the next hearing, November 29. Thus the exhibits and statements also run to the matter of fixing future

rates, which are to be up for hearing at that time.

Among the railroad statements submitted was that of Dr. J. H. Parmelee, vice-president of the Association of American Railroads and director of the A.A.R.'s Bureau of Railway Economics. Dr. Parmelee first testified as a witness in the mail-pay case in July, 1947, and his latest presentation was designed to bring up to date the statistics appearing in his earlier testimony.

J. L. Heywood, assistant comptroller of the Pennsylvania, was also among the railroad witnesses and he presented exhibits in connection with the studies conducted by the railroads to determine the costs of transporting mail. Among other things, Mr. Heywood's statement said it cost the roads $1,522,000,000 to carry mail from February 19, 1947, to December 31, 1950. During the same period, "basic" revenues for carrying the mail amounted to $636,436,000. The latter does not include the interim increase of 25 per cent which was authorized by the commission in December, 1947, and made retroactive to February 19, 1947.

To equal the cost of providing the service in the future the railroads would need an increase of 107 per cent over 1949 revenues, Mr. Heywood calculated. He emphasized that the 1949 rates, like the present rates, include the 25 per cent interim increase. He added that present losses for the handling of mail are running at the rate of $239,227,000 annually.

Wants Cut in Rates On Scrap in South

The Scrap Iron & Steel Institute has filed a complaint with the Interstate Commerce Commission, asking that rail rates on scrap in Southern territory be reduced 20 per cent.

Speaking for its 173 member dealers and brokers in the South, the institute said about 3 million tons of scrap iron and steel move within or from that territory annually. Because of present rates, ranging from $10 to $18 a gross ton, this traffic is fast being diverted to barge lines, the complaint added.

It also said that a 20 per cent cut in present rates would not only restore the traditional long hauls of scrap by rail, but would regain 500,000 tons from barges and move another 300,000 tons which now lies dormant because of high rates.

The institute said the roads reduced the rates on finished steel by 25 per cent last July, with the result that finished steel and newly manufactured items in box cars now move at less than scrap iron and steel. It added that efforts have been made to obtain rate reductions from the railroads, and "numerous" hearings held, but no relief has been obtained.

The proposed rate reduction would apply to 80,000-lb. minimum carloads, the complaint said. The rates would cover the movement of scrap iron and steel to consumers in the Birmingham-Knoxville-Atlanta areas, and to mills and foundries located principally along the Ohio river and its tributaries.

Car Surpluses and Shortages

Average daily freight car surpluses and shortages for the week ending November 4 were announced by the Association of American Railroads on November 9, as follows:

	Surplus	Shortage
Plain Box	0	17,861
Auto Box	20	231
Total Box	20	18,092
Gondola	464	6,404
Hopper	135	7,457
Covered Hopper	0	142
Stock	30	144
Flat	71	284
Refrigerator	3,256	0
Other	328	116
Total	4,304	32,639

Study Issued of Truck Costs in New England

The Bureau of Accounts and Cost Finding of the Interstate Commerce Commission has issued its Statement No. 5-50, a "Territorial Study Showing Development of Unit Costs, Operating Performance Factors, and Cost Scales" for motor carriers in New England territory for the year 1948. The study was identified as material which has been introduced in proceedings before the commission (Docket No. MC-C-1115, Motor Carrier Rates, New York City Area-New England). It was issued at this time "as a matter of information for carriers, shippers, regulatory agencies, and others not parties to such proceedings."

Gives Missouri Court Second Shot at Cases

The United States Supreme Court this week made it clear that suits brought in state courts under the Federal Employers Liability Act are not immune from dismissal by such courts on the score of *forum non conveniens*, i.e., on the ground that the court involved is an inconvenient one for either of the parties. The court sent two employee liability cases back to the Missouri Supreme Court, because it thought that court might have entertained the erroneous belief that it was bound to rule as it did when it upheld a lower Missouri court's action which denied dismissal motions that invoked the doctrine of *forum non conveniens*.

The U. S. Supreme Court's ruling was a 5-to-4 decision, announced by Justice Frankfurter. The opinion said that prior decisions of the court do not limit the power of a state to deny access to its courts to persons seeking recovery under the Federal Employers Liability Act—"if in similar cases the state for reasons of local policy denies resort to its courts and enforces its policy impartially . . . so as not to involve a discrimination against Employers Liability Act suits and not to offend against the Privileges-and-Immunities Clause of the Constitution." No such restriction is imposed upon the states "merely because the Employers Liability Act empowers their courts to entertain suits arising under it," the court added.

"Therefore," it concluded, "if the Supreme Court of Missouri held as it did because it felt under compulsion of federal law as enunciated by this court so to hold, it should be relieved of that compulsion. It should be freed to decide the availability of the principle of *forum non conveniens* in these suits according to its own local law. To that end we vacate the judgment of the Supreme Court of Missouri and remand the cause to that court for further proceedings not inconsistent with this opinion."

Justice Jackson filed a brief concurring opinion, while the dissenting opinion by Justice Clark was subscribed to also by Chief Justice Vinson and Justices Black and Douglas. The dissenters said it was the court's duty to sustain the Missouri court if there was valid ground to do so. "As there was a sufficient ground," they added, "we should not vacate and remand merely because certain statements of the Missouri court may indicate that it also felt under compulsion of federal decisions . . . ."

The two cases before the court were docketed as Nos. 15 and 16, October term, 1950. They involved liability suits that were brought in the St. Louis, Mo., circuit court against the Southern and the Atchison, Topeka & Santa Fe, respectively.

Railroads Dust Off "Help Wanted" Signs

As a result of stepped up defense preparations, the railroads have recalled large numbers of furloughed employees. The Railroad Retirement Board has reported that in some instances shortages of telegraphers, train dispatchers and journeyman mechanics have already arisen. To meet the situation, the board has spread the word to newspapers and to railway labor organizations outlining the need for more personnel. Experienced carmen, the board said, are urgently needed in many parts of the country in connection with freight car repair and car building programs. Other tradesmen in short supply are machinists, pipefitters, hammersmiths and boilermakers.

Freight Car Loadings

Loadings of revenue freight in the week ended November 4 totaled 862,184 cars, the Association of American

on number of cars per conductor, $580,-881.

While Pullman porters are not involved in the present case, the board said that some of the conductors' proposals would be applicable also to porters; and that the cost of extending such proposals to the porters would be another $10,844,269 per year. As to these financial implications, the board reviewed evidence pointing up the unprofitableness of Pullman operations, and the decline in business since 1945. Here were figures showing that the average number of Pullman conductors in service in 1949 was 1,836, as compared with 2,761 in 1945.

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Meanwhile the report had expressed the board's view that the parties' failure to settle most of the issues in collective bargaining was evidence of "a definitely unhealthy aspect of labor relations between the company and the organization." The parties did not respond to the board's suggestion that some of the issues be withdrawn—even though it was "made clear," as the report put it, "that this board would not undertake the impossible task of writing for them a virtually complete agreement of . . . extensive and complicated character."

Contract "Complicated"

"Both parties concede," the report also said, "that the agreement between this carrier and its conductors is one of the most elaborate, complicated, and technical contracts in the entire field of railroad labor relations; and it is clear that the numerous changes proposed . . . are calculated in the aggregate, not to simplify the working rules, but to render them even more complex and difficult to apply. It is doubtful whether any considerable number of persons, aside from the two principal witnesses (A. G. Wise and F. J. Boeckelman), understand the full import of the numerous existing and proposed rules.

"In these circumstances it is unquestionably of vital interest to both parties that they work out such rules between themselves. From the beginning of the hearings, therefore, it was obvious that, aside from a small number of major issues, this is not the type of dispute that should be submitted for findings and recommendations to an emergency board necessarily composed of persons outside the industry and without long experience in the actual application of such intricate rules."

The dispute went to the emergency board after the O.R.C. had called a strike for July 11. The call was cancelled after President Truman issued his July 6 executive order creating the board. While the Railway Labor Act calls for a report within 30 days, the parties agreed to an extension until November 3, the day on which the report was submitted. Public hearings in the case extended over a six-weeks period, from July 17 to August 25.

TOUTED BY A MINIATURE BILLBOARD on a theme popularized by the Southern Pacific, the "Oakland Acorn Express" has developed an enviable volume of passenger traffic among children and grown-ups of Oakland, Cal. There is even a miniature board of directors—composed of boy and girl scouts and others—who meet regularly to consider management problems. Patterned after the S.P.'s "Daylight," the two-ton live steam locomotive hauls passengers over a 1,500-ft. scenic line along the shore of Lake Merritt in Oakland. Plans for an extensive exhibit of railroad devices near the line's "ticket office" are being considered

Mail-Pay Agreement Submitted to I.C.C.

The railroads and the Post Office Department this week submitted to the Interstate Commerce Commission their joint stipulation for settling the mail-pay case. The agreement, already approved by both parties, was submitted at a public hearing before Commissioner Mitchell and Examiner Mullen.

As outlined in *Railway Age* of September 30, page 42, the stipulation would give the roads about $150 million additional for handling mail during the period between February 19, 1947, and December 31, 1950. It also contains provisions for a new rate structure for setting future rates, including the elimination of payments for the return of empty cars, and separation of line-haul and terminal charges.

After the joint agreement was filed, the railroads, and then the Post Office Department, entered various statements and exhibits into the record. This filing of evidence was necessary to give the commission a basis upon which it could make its finding of approval, or disapproval, of the stipulation. These submissions, both railroad and post office, are based on cost studies that have been made during the time this case has been pending before the commission.

While the primary purpose of entering the statements and exhibits at this time was to give the commission a basis for acting on the proposed settlement, it was also understood that witnesses of both parties would be subject to cross-examination on their respective statements at the next hearing, November 29. Thus the exhibits and statements also run to the matter of fixing future

rates, which are to be up for hearing at that time.

Among the railroad statements submitted was that of Dr. J. H. Parmelee, vice-president of the Association of American Railroads and director of the A.A.R.'s Bureau of Railway Economics. Dr. Parmelee first testified as a witness in the mail-pay case in July, 1947, and his latest presentation was designed to bring up to date the statistics appearing in his earlier testimony.

J. L. Heywood, assistant comptroller of the Pennsylvania, was also among the railroad witnesses and he presented exhibits in connection with the studies conducted by the railroads to determine the costs of transporting mail. Among other things, Mr. Heywood's statement said it cost the roads $1,522,000,000 to carry mail from February 19, 1947, to December 31, 1950. During the same period, "basic" revenues for carrying the mail amounted to $636,436,000. The latter does not include the interim increase of 25 per cent which was authorized by the commission in December, 1947, and made retroactive to February 19, 1947.

To equal the cost of providing the service in the future the railroads would need an increase of 107 per cent over 1949 revenues, Mr. Heywood calculated. He emphasized that the 1949 rates, like the present rates, include the 25 per cent interim increase. He added that present losses for the handling of mail are running at the rate of $239,227,000 annually.

Wants Cut in Rates On Scrap in South

The Scrap Iron & Steel Institute has filed a complaint with the Interstate Commerce Commission, asking that rail rates on scrap in Southern territory be reduced 20 per cent.

Speaking for its 173 member dealers and brokers in the South, the institute said about 3 million tons of scrap iron and steel move within or from that territory annually. Because of present rates, ranging from $10 to $18 a gross ton, this traffic is fast being diverted to barge lines, the complaint added.

It also said that a 20 per cent cut in present rates would not only restore the traditional long hauls of scrap by rail, but would regain 500,000 tons from barges and move another 300,000 tons which now lies dormant because of high rates.

The institute said the roads reduced the rates on finished steel by 25 per cent last July, with the result that finished steel and newly manufactured items in box cars now move at less than scrap iron and steel. It added that efforts have been made to obtain rate reductions from the railroads, and "numerous" hearings held, but no relief has been obtained.

The proposed rate reduction would apply to 80,000-lb. minimum carloads, the complaint said. The rates would cover the movement of scrap iron and steel to consumers in the Birmingham-Knoxville-Atlanta areas, and to mills and foundries located principally along the Ohio river and its tributaries.

Car Surpluses and Shortages

Average daily freight car surpluses and shortages for the week ending November 4 were announced by the Association of American Railroads on November 9, as follows:

	Surplus	Shortage
Plain Box	0	17,861
Auto Box	20	231
Total Box	20	18,092
Gondola	464	6,404
Hopper	135	7,457
Covered Hopper	0	142
Stock	30	144
Flat	71	284
Refrigerator	3,256	0
Other	328	116
Total	4,304	32,639

Study Issued of Truck Costs in New England

The Bureau of Accounts and Cost Finding of the Interstate Commerce Commission has issued its Statement No. 5-50, a "Territorial Study Showing Development of Unit Costs, Operating Performance Factors, and Cost Scales" for motor carriers in New England territory for the year 1948. The study was identified as material which has been introduced in proceedings before the commission (Docket No. MC-C-1115, Motor Carrier Rates, New York City Area-New England). It was issued at this time "as a matter of information for carriers, shippers, regulatory agencies, and others not parties to such proceedings."

Gives Missouri Court Second Shot at Cases

The United States Supreme Court this week made it clear that suits brought in state courts under the Federal Employers Liability Act are not immune from dismissal by such courts on the score of *forum non conveniens*, i.e., on the ground that the court involved is an inconvenient one for either of the parties. The court sent two employee liability cases back to the Missouri Supreme Court, because it thought that court might have entertained the erroneous belief that it was bound to rule as it did when it upheld a lower Missouri court's action which denied dismissal motions that invoked the doctrine of *forum non conveniens*.

The U. S. Supreme Court's ruling was a 5-to-4 decision, announced by Justice Frankfurter. The opinion said that prior decisions of the court do not limit the power of a state to deny access to its courts to persons seeking recovery under the Federal Employers Liability Act—"if in similar cases the state for reasons of local policy denies resort to its courts and enforces its policy impartially . . . so as not to involve a discrimination against Employers Liability Act suits and not to offend against the Privileges-and-Immunities Clause of the Constitution." No such restriction is imposed upon the states "merely because the Employers Liability Act empowers their courts to entertain suits arising under it," the court added.

"Therefore," it concluded, "if the Supreme Court of Missouri held as it did because it felt under compulsion of federal law as enunciated by this court so to hold, it should be relieved of that compulsion. It should be freed to decide the availability of the principle of *forum non conveniens* in these suits according to its own local law. To that end we vacate the judgment of the Supreme Court of Missouri and remand the cause to that court for further proceedings not inconsistent with this opinion."

Justice Jackson filed a brief concurring opinion, while the dissenting opinion by Justice Clark was subscribed to also by Chief Justice Vinson and Justices Black and Douglas. The dissenters said it was the court's duty to sustain the Missouri court if there was valid ground to do so. "As there was a sufficient ground," they added, "we should not vacate and remand merely because certain statements of the Missouri court may indicate that it also felt under compulsion of federal decisions . . . ."

The two cases before the court were docketed as Nos. 15 and 16, October term, 1950. They involved liability suits that were brought in the St. Louis, Mo., circuit court against the Southern and the Atchison, Topeka & Santa Fe, respectively.

Railroads Dust Off "Help Wanted" Signs

As a result of stepped up defense preparations, the railroads have recalled large numbers of furloughed employees. The Railroad Retirement Board has reported that in some instances shortages of telegraphers, train dispatchers and journeyman mechanics have already arisen. To meet the situation, the board has spread the word to newspapers and to railway labor organizations outlining the need for more personnel. Experienced carmen, the board said, are urgently needed in many parts of the country in connection with freight car repair and car building programs. Other tradesmen in short supply are machinists, pipefitters, hammersmiths and boilermakers.

Freight Car Loadings

Loadings of revenue freight in the week ended November 4 totaled 862,184 cars, the Association of American

Railroads announced on November 9. This was a decrease of 25,423 cars, or 2.9 per cent, compared with the previous week; an increase of 283,203 cars, or 48.9 per cent, compared with the corresponding week last year; and an increase of 18,598 cars, or 2.2 per cent, compared with the equivalent 1948 week.

Loadings of revenue freight for the week ended October 28 totaled 887,607 cars, and the summary for that week as compiled by the Car Service Division, A.A.R., follows:

REVENUE FREIGHT CAR LOADINGS
For the week ended Saturday, October 28

	1950	1949	1948
Eastern	151,973	112,092	162,348
Allegheny	175,121	90,084	186,795
Pocahontas ...	68,086	19,820	70,326
Southern	134,577	105,263	144,910
Northwestern .	147,909	82,854	142,242
Central Western	142,396	130,876	148,793
Southwestern .	67,545	50,326	75,559
Total Western Districts	357,850	264,056	366,594
Total All Roads	887,607	591,315	930,973
Commodities:			
Grain and grain products ...	58,970	54,870	58,293
Livestock	16,213	18,494	19,940
Coal	163,220	53,943	178,700
Coke	16,354	4,038	15,483
Forest products	46,451	41,782	51,472
Ore	75,524	7,284	67,482
Merchandise l.c.l.	88,019	88,465	110,857
Miscellaneous .	422,856	322,439	428,746
October 28 ...	887,607	591,315	930,973
October 21 ...	890,990	589,088	926,976
October 14 ...	888,559	583,948	912,957
October 7 ...	863,676	574,228	891,651
September 30 .	879,985	658,128	908,866
Cumulative total 43 weeks ..	32,030,094	30,151,557	35,887,592

In Canada.—Car loadings for the week ended October 28 totaled 92,555 cars, compared with 92,733 cars for the previous week, and 87,944 cars for the corresponding week last year, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
October 28, 1950 ..	92,555	36,243
October 29, 1949 ..	87,944	32,119
Cumulative totals for Canada:		
October 28, 1950 ..	3,192,814	1,343,709
October 29, 1949 ..	3,240,144	1,327,777

New Rules for Reporting Employment and Wages

A revision of the Interstate Commerce Commission's "Rules Governing the Classification of Railroad Employees and Reports of Their Service and Compensation" has been ordered by the commission's Division 1. The revision order was dated October 19 and made public November 7. It becomes effective January 1, 1951.

The new rules are generally in line with recommendations made by a joint subcommittee of the committees on disbursements and statistics of the Accounting Division, Association of American Railroads. Among other changes from the present rules are those which clarify the instructions pertaining to the mid-month count of railroad employees. The clarifications were made necessary by the establishment of the 40-hour week for non-operating employees.

Also, the new rules eliminate the requirement for separate reporting of pro-rata overtime. This is now a small item and it will be included with the straight time. Provision is also made for the reporting of vacation time on a uniform basis, and for the reporting of all employment on the basis of hours per month. In the latter connection some reports are now on a days-per-month basis.

Photo by W. A. Lucas

NEW RAILROAD MUSEUM AT NEWARK, N. J., opened October 25. Collections provided by the Railroadians of America, with emphasis on railroads serving New Jersey, are displayed in rooms set aside in its building by the New Jersey Historical Society. At the opening exercises the speakers were Charles Bradley, president of the society; Martin W. Clement, chairman of the board of the Pennsylvania; and Robert S. Henry, vice-president (public relations), of the Association of American Railroads

Study of Rail Shipments Of Fruits and Vegetables

The Bureau of Agricultural Economics of the United States Department of Agriculture has issued a study entitled "Pattern of Distribution of Fruits and Vegetables Shipped by Railroad, 1939 and 1947, and Transportation Charges, 1947." The study, by George T. Reeves and Helen V. Smith, is a document of 55 mimeographed sheets, 49 of which are occupied by tables.

The brief text points up the data's showing as to leading origins and destinations for rail shipments of fruits and vegetables, distribution of shipments from major supply areas, sources of supply for leading markets, and comparative transportation charges by rail.

Contracts Signed in 40-Hr. Case of Yardmasters Union

Representatives of the Railroad Yardmasters of America and interested railroads last week signed contracts embodying terms of the agreement which was entered to settle that union's 40-hr.-week case on the basis of the so-called Steelman formula. The formula is the one which was framed by Dr. John R. Steelman, assistant to President Truman, and which settled the like case involving yardmen represented by the Switchmen's Union of North America.

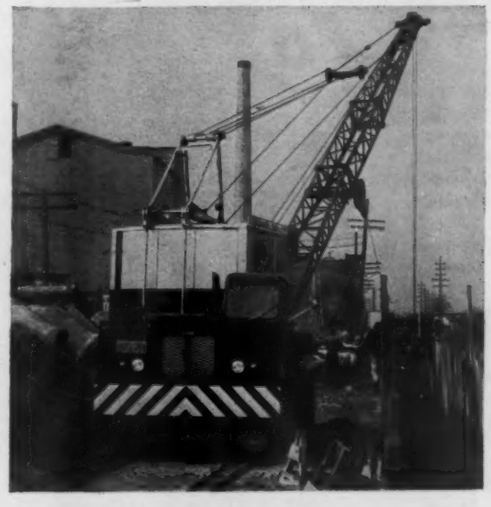
The R.Y. of A. agreement to settle on a similar basis was announced at the White House on September 30 (see *Railway Age* of October 7, page 75); but the actual signing of the contracts was delayed more than a month thereafter. Generally the settlement provides for a wage increase of 23 cents per hr. and a three-year moratorium on further changes in wages and rules, but there are arrangements for quarterly cost-of-living adjustments. As to the 5-day, 40-hr. week, it was adopted in principle but its installation was deferred for at least a year.

R.R.B. Restrained from Paying R.E.A. Strikers

The Railroad Retirement Board has been restrained, by a temporary injunction issued in the Federal District Court in Chicago, from paying unemployment compensation to striking employees of the Railway Express Agency. The injunction was sought by the express agency in connection with the recent strike of its drivers in the New York metropolitan area. It is the opinion of the express agency that the strike was not in accord with the procedures of the Railway Labor Act and therefore the board, under the provisions of the Railroad Retirement Act, has no authority to pay unemployment compensation to the strikers.

Opinion of the retirement board itself is divided on the question. But briefs, and a motion to dismiss the injunction, were filed by the majority opinion group of the board before Judge Michael L. Igoe on November 2. Pre-

gives you the winning combination Mobility *plus* Performance *plus* Stamina



LIMA Truck-Mounted "Paymaster" that pays extra dividends because it can travel between jobs *on its own power*—at automotive speeds Type 34-T is a convertible shovel, crane, dragline or pull shovel, mounted on a standard 10-wheel truck crane carrier with independent engine for travel It has a crane capacity of 20 tons (35 ft. boom, 10 ft. radius) and shovel capacity of ¾ or 1 yd., with outriggers extended. It can travel up to 31 M. P. H. Rotating equipment duplicates that of the famous crawler mounted "Paymaster", with alterations adapting it to truck mounting—thus assuring the same high peak, continuous performance which has made the "Paymaster" the leader in its field.

"Wheel-Mounted" units also available

You can now also get the LIMA "Paymaster" and the LIMA Type 604 (35 ton crane) in a single engine wheel mounted unit. Crawler Mounted LIMA machines are available in Shovel capacities from ¾ to 6 yards, Cranes to 110 tons and Draglines variable.

It will pay you to consult your nearest LIMA Sales Office or Representative before you buy your next shovel, crane or dragline. Offices in principal cities of the world.

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liminary arguments of both sides were also heard at that time.

By implication, the opinion of the express agency is confirmed by the recommendation of the emergency board with regard to pay increases. The emergency board has held that such increases should be retroactive only to the time the strike terminated, on October 3.

Rail Rates Diverting Oil Traffic to Trucks?

Further general rate increases will not bring any added revenue to the railroads, at least insofar as the petroleum industry is concerned, Lee R. Cowles, traffic manager of the Standard Oil Company of Indiana, told the Chicago Regional Chapter of the Association of Interstate Commerce Commission Practitioners on November 3.

The record oil movement by rail during World War II made it possible, in Mr. Cowles' opinion, to win the war, but with the termination of hostilities, and the reversion of traffic to prewar patterns, truck transportation has taken over much of the traffic formerly handled in tank cars, he said. "The railroads tried hard, and were getting some of the business back, but the trend was effectively stopped when they embarked upon the succession of general rate increases, Ex Parte 148, 162, 166 and 168. With each increase, more traffic was lost to the trucks.

"During the past year, the railroads have attempted to make effective rates on a basis lower than many truck rates, but suspension proceedings have delayed or defeated most of these efforts, and the rate level generally still is lower by truck than by rail. Without having any figures from which to make an accurate statement, it is my belief that the oil industry's traffic susceptible of transportation by either rail or truck has changed from 75 per cent rail and 25 per cent truck, just prior to the war, to 30 per cent rail and 70 per cent truck at the present time."

Mr. Cowles said that in 1926, before highway transport was of any importance, railroads in the United States originated 1,818,000 carloads of petroleum products, not including crude oil. In 1941 this figure had increased 16 per cent to 2,114,000 cars and it continued to increase every year up through 1947. When the general rate increases began to take an effect in 1948, tonnage dropped off 9.4 per cent to 1,720,000 cars—below the 1926 figure—and in 1949 it dropped another 15 per cent to 1,458,000 cars.

"It is known that the railroads are considering making another general increase in rates of perhaps 15 per cent," Mr. Cowles concluded. "If they need an increase in revenue, it seems apparent that a 15 per cent increase in petroleum products rates is not the way to produce it."

September Accident Statistics

The Interstate Commerce Commission has made public its Bureau of Transport Economics and Statistics' preliminary summary of steam railway accidents for September and this year's first nine months. The compilation, which is subject to revision, follows:

Item	Month of September 1950	1949	9 months ended with September 1950	1949
Number of train accidents*	875	660	7,234	6,542
Number of accidents resulting in casualties	48	39	354	363
Number of casualties in train, train-service and nontrain accidents:				
Trespassers:				
Killed	146	118	932	971
Injured	118	94	888	854
Passengers on trains:				
(a) In train accidents*				
Killed	33	—	74	1
Injured	105	51	981	410
(b) In train-service accidents				
Killed	5	—	22	14
Injured	155	178	1,456	1,570
Travelers not on trains:				
Killed	2	—	6	4
Injured	53	63	535	562
Employees on duty:				
Killed	45	33	255	301
Injured	1,896	1,641	15,198	17,126
All other nontrespassers:**				
Killed	120	125	1,133	1,122
Injured	507	417	4,214	3,933
Total — All classes of persons:				
Killed	351	276	2,422	2,413
Injured	2,834	2,444	23,272	24,455

* Train accidents (mostly collisions and derailments) are distinguished from train-service accidents by the fact that the former caused damage of $275 or more to railway property. Only a minor part of the total accidents result in casualties to persons, as noted above.

** Casualties to "Other nontrespassers" happen chiefly at highway grade crossings. Total highway grade-crossing casualties for all classes of persons, including both trespassers and nontrespassers, were as follows:

Persons:				
Killed	112	113	1,048	1,022
Injured	350	256	2,894	2,513

Pressed Steel Car Reopens Its Mount Vernon Plant

The Pressed Steel Car Company has reopened its Mount Vernon, Ill., freight-car building plant after a shutdown of more than a year. The plant opened with a backlog of 5,950 cars, John I. Snyder, Jr., president, said, sufficient to engage the plant's entire production for at least one year. A second plant at Hegewisch, Ill., is being tooled up to produce the company's new lightweight freight car, the "Unicel."

Higher Commutation Fares For N.Y.C. in Chicago Area

The Interstate Commerce Commission has approved a New York Central proposal to increase its interstate

(Continued on page 93)

"Save Our Highways"

Early this year, John J. Roos, of Knoxville, Tenn., made an automobile trip to Florida. He brought back with him unpleasant memories of the condition of the roads he traveled and of fear for his own and his family's safety on truck-crowded highways.

As he talked about his experiences he learned that many of his friends, too, resented seeing roads their money helped to build being battered to bits by overweight and overloaded trucks; that they, too, were worried about high taxes. They told him that if he would lead they would follow in an organized effort to improve conditions.

The result was the "Save Our Highways Club"—which, according to the Southern magazine, Ties, "has reached statewide proportions in Tennessee and is beginning to attract nationwide attention." Politically non-partisan, and supported entirely by voluntary contributions, the club is telling its story to newspapers and magazines—spotlighting the more flagrant cases of highway damage, calling attention to the enormous expenditures of tax money being required to build highways for truckers. Its general objectives are:

1. To preserve and protect the taxpayers' investment in highways;

2. To reduce hazards of accident, death and injury to all highway users;

3. To require payment of adequate user charges by those commercial intercity highway carriers who use this expensive taxpayer-built facility as a place of business for private gain;

4. To prevent destruction of highways and highway bridges by overloaded box-car-size vehicles;

5. To lessen the tax burden created by construction and maintenance of stronger-than-necessary highways for the benefit of a comparatively small number of huge commercial trucks;

6. To enhance the pleasure, convenience and safety of the motoring public, and

7. To support and encourage representatives in government in all efforts to further these objectives.

Mr. Roos, like some of the Knoxville club's other original and most active members, is a railroad employee—a Southern enginemen. He and other railroaders frankly state they are also concerned about future job prospects in the railroad industry. But they have plenty of non-railroad allies—a Knoxville insurance executive, the plant superintendent for a marble firm, the retired superintendent of roads and trails in Great Smoky Mountain National Park. What promise their combined efforts show of obtaining some or all of their indicated objectives is best revealed by the fact that Tennessee truckers are already reported to have undertaken to discredit the club—apparently because they recognize it as a real "grassroots" movement.


ERIE

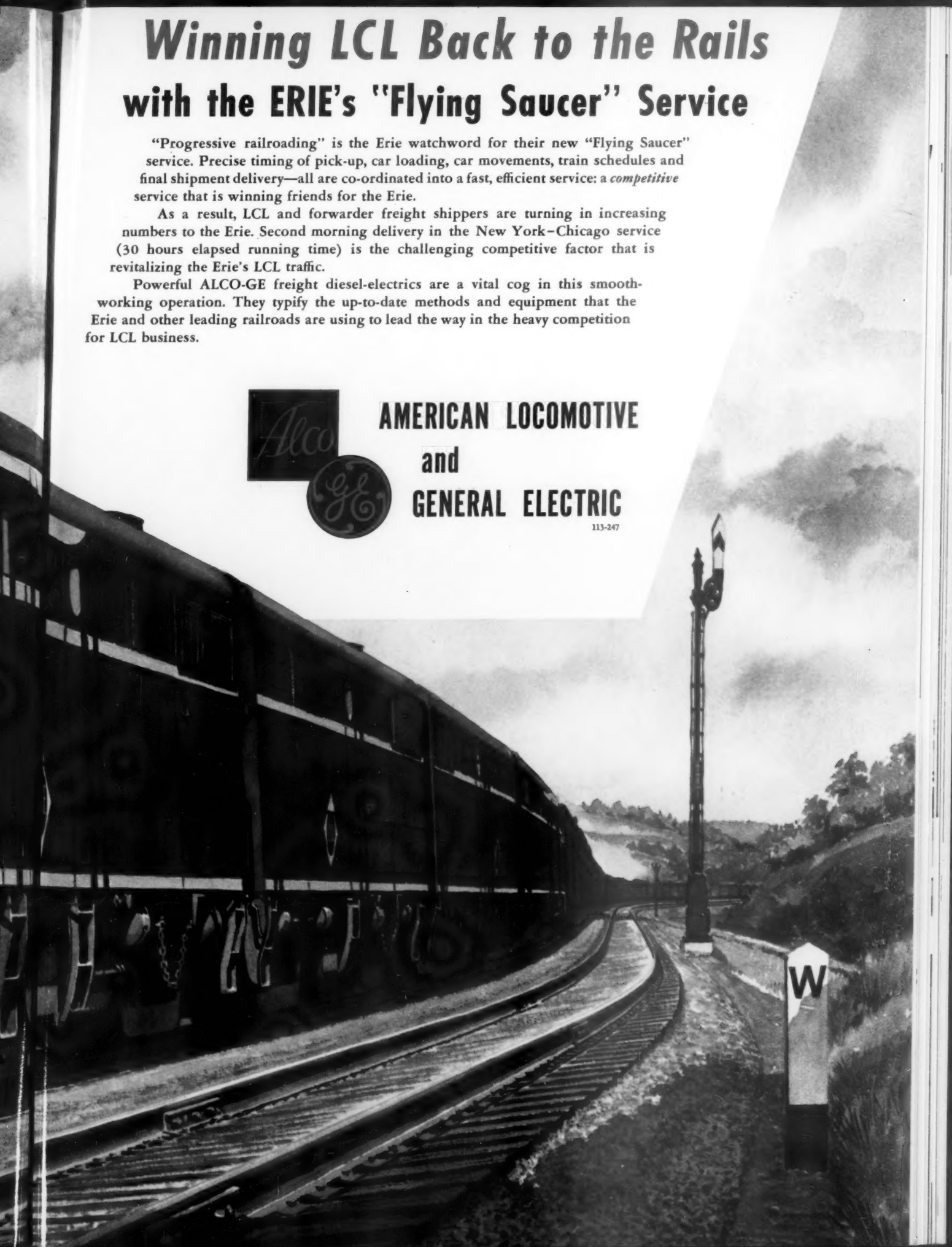
Winning LCL Back to the Rails

with the ERIE's "Flying Saucer" Service

"Progressive railroading" is the Erie watchword for their new "Flying Saucer" service. Precise timing of pick-up, car loading, car movements, train schedules and final shipment delivery—all are co-ordinated into a fast, efficient service: a *competitive* service that is winning friends for the Erie.

As a result, LCL and forwarder freight shippers are turning in increasing numbers to the Erie. Second morning delivery in the New York–Chicago service (30 hours elapsed running time) is the challenging competitive factor that is revitalizing the Erie's LCL traffic.

Powerful ALCO-GE freight diesel-electrics are a vital cog in this smooth-working operation. They typify the up-to-date methods and equipment that the Erie and other leading railroads are using to lead the way in the heavy competition for LCL business.



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113-247

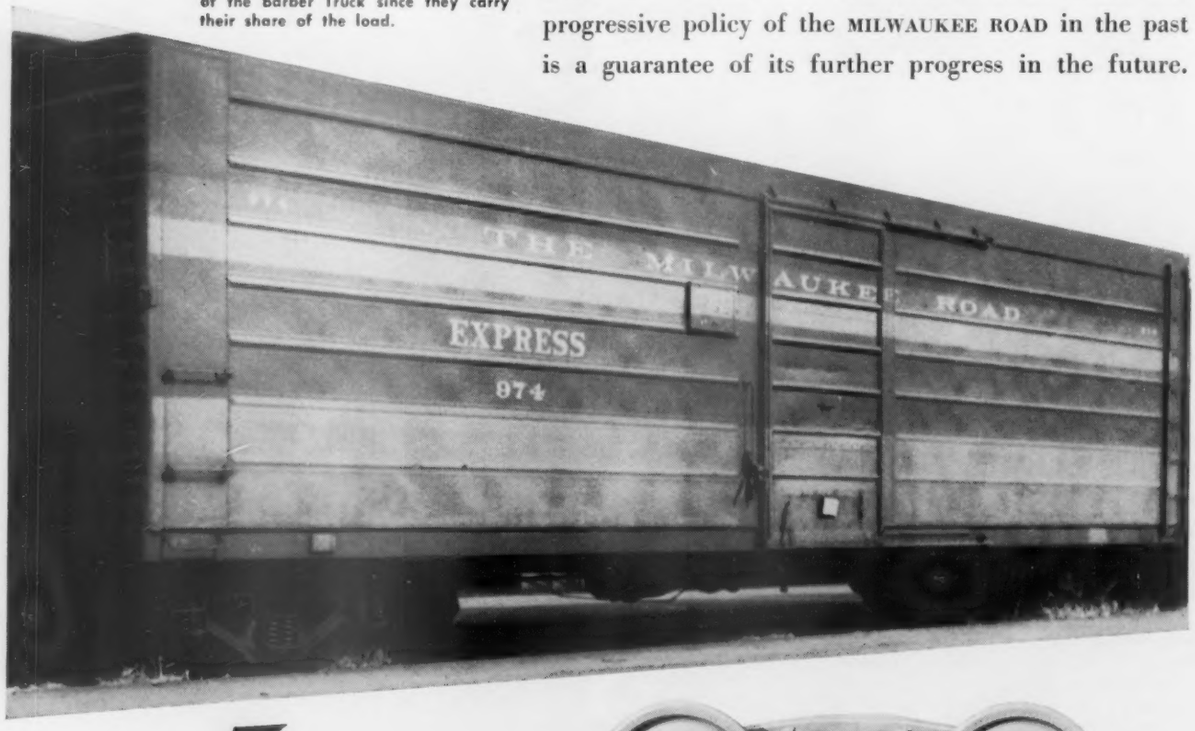
Congratulations MILWAUKEE ROAD

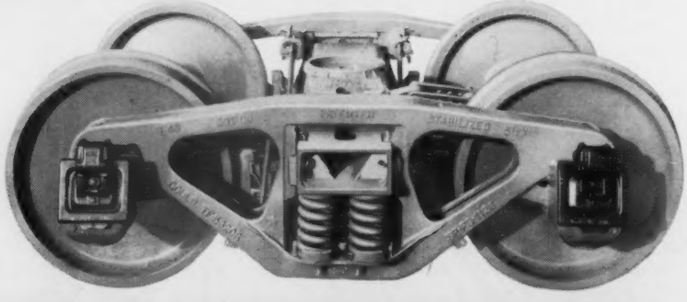
November 20, 1850 the "new" Milwaukee and Mississippi Railroad was getting ready to test its first tracks and train.

The "train", consisting of a locomotive and two cars, reached the end of the line, Wauwatosa, Wis. five miles away, in about twelve minutes.

During the last 100 years, these five miles have increased to 10,670 miles of main track, and Rolling Stock has increased to more than 64,600 units. The progressive policy of the MILWAUKEE ROAD in the past is a guarantee of its further progress in the future.

The side springs increase the capacity of the Barber Truck since they carry their share of the load.





One of The MILWAUKEE ROAD'S Express Cars, with Barber Trucks. Over 250,000 Car Sets of Barber Variable-Friction Stabilized Trucks have been ordered by American Railroads.

5324

STANDARD CAR TRUCK COMPANY
332 SOUTH MICHIGAN AVENUE, CHICAGO, ILLINOIS

(Continued from page 88)

commutation fares between Chicago, Ill., and Chesterton, Ind., and intermediate points in Indiana and Illinois. The commission's report by Commissioner Rogers was in the I.&S. No. 5742 proceeding.

The approved increases will make prices of restricted monthly books range from $13.90 for rides of 15.6 mi. to $22.90 for service from Chesterton, which is 41.1 mi. from Chicago. The cost of unrestricted monthly books will range from $15.40 to $25.40. Present charges, which are for unrestricted books, range from $9.65 to $22.45.

Board for 10-Cent Raise For New York Expressmen

A wage increase of 10 cents per hour for truck drivers employed by the Railway Express Agency in the New York metropolitan area has been recommended by an emergency board which submitted its report to President Truman on November 2. The employees involved were on strike from September 23 until October 13, and that situation prompted the board to recommend that the raise be retroactive only to the latter date.

"Under normal circumstances," the report said, "the board would have recommended the increase be made retroactive to September 1, 1950, when other New York truck drivers got theirs. In view of the work stoppage, however, which the board believes was outside the spirit, if not the letter, of the Railway Labor Act, we recommend that the increase be made retroactive to October 13, 1950, the day the strike ended."

Members of the board were Chairman Grady Lewis; Rev. William J. Kelley, O.M.I.; and Joseph L. Miller. The involved R.E.A. drivers were represented by the International Brotherhood of Teamsters, American Federation of Labor.

In recommending the 10-cent raise to bring wages of the R.E.A. employees up to those of New York truck drivers generally, the board emphasized that it was dealing only with the "local" situation. "It follows, therefore," it added, "that nothing said in this report may be construed, now or later, to imply, by inference, or otherwise, that the recommendations here made are to serve as a pattern, or formula, for the readjustment of any other working agreement in the trucking or railroad industry."

As to the board's view that the strike was "outside the spirit, if not the letter," of the Railway Labor Act, the report pointed up the union's refusal to submit the case to the act's mediation procedures. "The carrier," the report said, "invoked mediation of the dispute by the National Mediation Board on September 21, 1950. The organizations declined such mediatory services . . . and instituted a work stoppage. . . ."

There were issues in addition to the wage controversy. They included the union's demand for more liberal "welfare" arrangements, such as sick benefits, insurance, pensions, etc. The board recommended some changes in the present welfare arrangements, estimating that what it proposed would cost R.E.A. the equivalent of giving each covered employee an additional wage increase of 3 cents per hour.

Also, there were demands for various changes in working rules, including one calling for elimination of hourly-rated employees, and the establishment of a minimum number of 3,500 scheduled positions, which would mean about 1,200 new full-time jobs. The board recommended that the rules demands be withdrawn.

MORE THAN 350,000 AUTOS have parked in the Terminal Railroad Association's 176-car parking lot at the St. Louis Union Station since its completion two years ago. The lot was built to provide off-street parking space for patrons bringing passengers to or from trains. It is not designed or intended for long-time parking by travelers. Parking is controlled by means of a ten-cent charge for the first two hours, plus ten cents for each additional hour. A pedestrian subway (originating under the canopy to the right of the attendant's booth shown above) connects the lot with the west end of the station concourse, thereby eliminating a dangerous street crossing and a long walk to the station entrance. The lot cost $230,000 to complete, including the cost of acquiring the land, grading, and building the subway, which was completed in October, 1949. Receipts from parking charges just about meet the labor cost of policing and supervising the lot. It has proved a very popular service, particularly on week-ends and around holidays. And, interestingly, operators of the station restaurant report that the opening of the lot has improved their luncheon business

Waybill Studies

Several additional waybill studies have been issued recently by the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission. They are:

Statement No. 5038, State-to-State Distribution of Traffic and Revenue in the Manufactures and Miscellaneous and Forwarder Traffic Groups—Terminations in the Year 1948.

Statement No. 5039, Traffic and Revenue in the Products of Agriculture Group, by Commodity Class, Territorial Movement, Length of Haul (Short-Line), and Type of Rate—All Terminations in 1949.

Statement No. 5040, Traffic and Revenue in the Animals and Products Group, by Commodity Class, Territorial Movement, Length of Haul (Short-Line), and Type of Rate—All Terminations in 1949.

Statement No. 5043, Traffic and Revenue in the Products of Mines Group, by Commodity Class, Territorial Movement, Length of Haul (Short-Line), and Type of Rate—All Terminations in 1949.

Statement No. 5044, Traffic and Revenue in the Products of Forests Group, by Commodity Class, Territorial Movement, Length of Haul (Short-Line), and Type of Rate—All Terminations in 1949.

Statement No. 5045, Traffic and Revenue in Classes 501 Through 597 of the Manufacturers and Miscellaneous Group, by Commodity Class, Territorial Movement, Length of Haul (Short-Line), and Type of Rate—All Terminations in 1949.

Statement No. 5051, Quarterly Comparisons of Traffic and Revenue by Commodity Classes — Terminations in First Quarter 1950, 1949, 1948 and 1947.

Statement No. 5054, Territorial Distribution of Traffic and Revenue by Commodity Groups—Terminations in First Quarter of 1950.

National Assn. of Shippers Advisory Boards—Correction

The article, "Shippers Call for More Vigorous Car Building and Repair Program," in the October 14 *Railway Age*, concerning the annual meeting of the National Association of Shippers Advisory Boards at Denver, Colo., did not give credit to all of the hosts for the luncheon session. The luncheon, at which W. T. Faricy, president of the Association of American Railroads, was the guest speaker, was sponsored jointly by the Denver Chamber of Commerce, the Traffic Club of Denver, the Denver Commercial Traffic Club, the

Women's Traffic Club of Denver, the Denver Chapter of the Association of Interstate Commerce Commission Practitioners, the World Trade Club of Denver, the Off-Line General Passenger Agents' Association, the Denver Passenger Association, and the Central Western Shippers Advisory Board.

A.A.R. Member Roads Will Meet November 17

The annual meeting of member roads of the Association of American Railroads will be held November 17 at the Waldorf-Astoria Hotel in New York. It will be preceded on November 16 by a meeting of the association's present board of directors.

Business of the member-road meeting will include election of directors for the coming year. Following that meeting, the new board will convene to elect the association's officers.

"Frisco Day" Opens New Yard and Shops

The new multi-million dollar Springfield yard and Diesel shops of the St. Louis-San Francisco were opened on November 3 at Springfield, Mo., climaxing "Frisco Day" which was celebrated throughout the city. President Clark Hungerford dedicated the new facilities in a ceremony held at the shops before several hundred business and civic leaders as well as by directors and officers of the railroad.

The ceremonies were preceded by a meeting of the railroad's directors and by a special luncheon, given in honor of the board by the Springfield Chamber of Commerce. Following the luncheon the entire group made a tour of the Frisco's Springfield facilities aboard a special train.

Earlier in the day, President Hungerford received an honorary LL.D. degree from Drury College in a special convocation. Speaking to the convocation audience, Col. Hungerford said that one of the most valuable characteristics of the nation's railway system is its efficiency of performance. "It is a quality that has been greatly enhanced by the technological advancements of the 20th century." Paying tribute to the Diesel locomotive, Col. Hungerford said that it has "served as a measure of salvation for an industry whose margin of profit has offered little room for absorption of the greatly increased costs of the last decade."

Railway Magazine Editors Meet at Boston

More than one and one-half million people read each month the approximately 45 magazines published by that number of railroads, Clifford G. Massoth, editor of the Illinois Central Magazine and president of the American Railway Magazine Editors Association, told some 75 members and guests of that organization who attended its 28th annual convention at Boston, Mass., November 1-4.

"Although the railroad industry can justly claim to have been a prime mover in the creation of the American republic," Mr. Massoth said, "the industry knows that it must prove to the American people that the railroads are essential to the continued progress of the nation. . . . In such an industry, where the plant is so widespread, and where there is such a variety of occupations, the railway magazine has a valuable educational role.

"More and more, railway magazines are tackling the task of economic education to tell the dollars and cents 'facts of life.' . . . The goal on which today's railroad editor has set his sights is not so much the technical aspects of magazine production, but rather a method for getting railroad employees interested in the future of their industry, and teaching them the basic truths that their jobs are only as good as their company's chances of survival."

Other features of the convention included an "Idea Factory," consisting of a number of short talks by various members on different aspects of magazine production, layout and content; an address at the association's annual dinner by John H. Crider, editor-in-chief of the Boston Herald; and a talk by George Peregrim, of Merrill Lynch, Pierce, Fenner & Beane, on "Dramatizing Your Financial Picture."

Alfred E. Greco of Chicago, editor of the Pullman News, was elected to succeed Mr. Massoth as president of the association. Other officers elected were: First vice-president, Virginia Tanner, Baltimore, Md., editor, Baltimore & Ohio Magazine; second vice-president, Hugh Lee Fitts, St. Louis, Mo., staff editor, Missouri Pacific Magazine; secretary, William B. Grumley, Cleveland, Ohio, editor, Nickel Plate Road Magazine (reelected), and treasurer, Harry F. Tate, Jr., St. Louis, advertising agent, Missouri-Kansas-Texas (reelected). In addition to Mr. Massoth, the executive committee includes Clifford A. Somerville, Boston, editor-in-chief, Boston & Maine Magazine; William E. Deaton, Joliet, Ill., editor, Elgin, Joliet & Eastern Milepost, and John Green, Philadelphia, Pa., assistant editor, Reading Magazine. Mr. Somerville was chairman of the committee on arrangements for the convention.

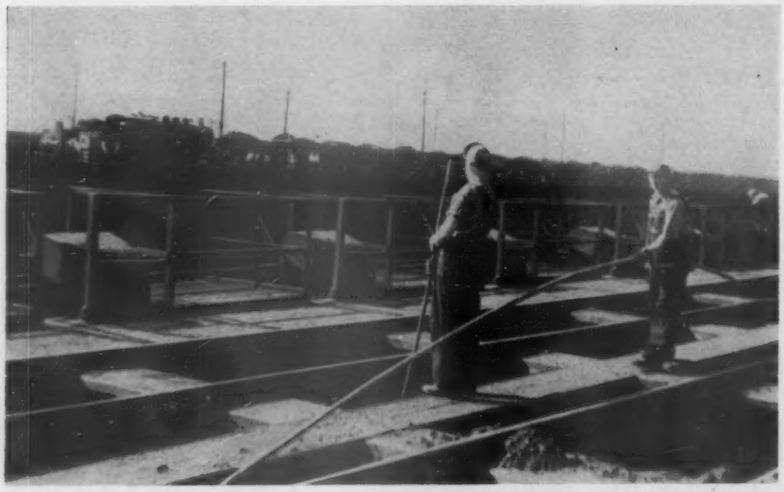
About 20 of those attending the meeting participated in a post-convention trip to Bangor, Me., Mt. Desert Island and Belfast, arranged jointly by the Bangor & Aroostook and the Belfast & Moosehead Lake.

Airport Aid for 1951 Will Reach $51 Million

Federal funds totaling $24,838,910 have been allocated under the Federal Aid Airport Program for work on 186 airport construction or development projects during the current fiscal year which will end June 30, 1951. This was announced November 8 by D. W. Nyrop, administrator of the Civil Aeronautics Administration, who pointed out that the programmed work also contemplates expenditure on the 186 projects of an additional $26,184,708 of "matching funds" provided by states or other local sponsors of the airports involved.

The 186 projects include 73 for construction or improvement of Class I, II and III airports, representing $2,765,798 in federal funds; and 113 for construction or development of Class IV or larger airports, totaling $22,073,112 in federal funds.

A further analysis of the proposed program, Mr. Nyrop explained, shows that 40 projects involve $6,006,882 for land acquisition, 67 projects involve $10,472,331 for building construction, 25 projects involve $1,383,795 for high intensity light installations, and that $33,160,610 will go to some 164 proj-



ON THE GREAT NORTHERN'S ore docks they use long, flexible tamarack "pipe poles" to break up lumps in the loading pockets

Spring Packing Corporation Joins in a Salute to 100 Years of Successful Railroading

FAMOUS for its early introduction of fast running passenger trains and for its gigantic track network linking the Mid-west to the Pacific Coast, the Milwaukee Road stands today as one of modern America's vital transportation systems. Congratulations, Milwaukee, on 100 years of successful railroading.

SPRING PACKING

HOLDRITE RETAINERS

They Help the Milwaukee Stop Hot Boxes

Used on 141 Railroads!

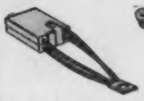
For 30 Years  *the Standard*

SPRING PACKING CORPORATION

332 South Michigan Ave., Chicago 4, Illinois

OTHER SPRING PACKING PRODUCTS

Chrome Lock Gasketing



Pittsburgh Carbon Brushes

King Automatic Brake Slack Adjuster

News Briefs . . .

. . . Expanded sleeping car service between Boston, Mass., and Florida points will be provided by the New York, New Haven & Hartford, beginning December 15. Four cars in each direction, providing all types of open section and room space, will be operated daily between Boston and Miami, Fla., two cars leaving Boston on the "Colonial" at 8:30 a.m., and two on the "Senator" at 11 a.m. A third car on the "Senator" will run alternately to Sarasota, Fla., and St. Petersburg every other day.

. . . In recognition of the success of its program of advertising inauguration of the "Phoebe Snow," new New York-Buffalo streamline train, the Delaware, Lackawanna & Western has been given an award of special recognition by the Bureau of Advertising of the American Newspaper Publishers Association. The Lackawanna's "Phoebe Snow" campaign was selected for inclusion in the 1950 Blue Book of Newspaper Advertising, a compilation of case histories of 50 of the most outstanding newspaper advertising campaigns of 1949.

. . . Welded rail has been laid over the heavily traveled 10½-mi. center track of the multi-tracked Chicago & North Western between Clybourn (Chicago) and Wilmette, Ill. The new installation uses 115-lb. rail in lengths up to 3,861 ft., depending on signal circuit requirements. Using mechanized rail laying equipment, track gangs laid up to 6,000 feet of new rail daily. Most of it was pre-welded in 700-ft. lengths at a distant point and transported to the scene on roller-equipped flat cars. Said to be the longest welded rail installation on the North Western system, the project cost approximately $285,000.

. . . The Texas & Pacific has ordered its enginemen to burn the oscillating headlights of Diesel locomotives during daylight hours as well as at night. Conceived as a safety measure, the order was issued following the success, safety-wise, of an earlier order which required use of regular headlights on all locomotives throughout daylight hours.

ects for construction of landing areas such as runways, parking areas, and taxiways.

44 Reorganization Cases Pending as of June 30

Forty-four railroads, including 13 Class I carriers and 31 others, were in receivership or trusteeship as of June 30, according to a recent compilation of the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission. Their total operated mileage was 12,679.

These figures for June 30 were the same as those for December 31, 1949, when the total operated mileage in receivership or trusteeship was 5.34 per cent of all operated steam mileage, as compared with 5.59 per cent as of December 31, 1948, and 9.55 per cent as of December 31, 1947. The report notes that no roads were placed in the hands of receivers or trustees during the first half of 1950.

Amortization Applications Go First to the N.S.R.B.

Applications for authority to amortize defense facilities over a five-year period for tax purposes must be filed initially with the National Security Resources Board. This was made clear by N.S.R.B. in an October 27 statement which also announced that necessary application forms are now available.

Previously it had been thought that applications would be submitted initially to claimant agencies for industries involved, such as the Defense Transport Administration for the railroads. President Truman's order making the chairman of N.S.R.B. the certifying authority stipulated that he "shall utilize departments and agencies of the government according to their respective assigned responsibilities pursuant to the Defense Production Act of 1950." (See *Railway Age* of October 21, page 44.)

N.S.R.B.'s October 27 statement explained that the procedures will be as follows: "Applications filed with the Resources Board will be sorted and assigned to the appropriate agencies of the government which will examine the applications and make their recommendations. Upon their return to the Resources Board, the applications and recommendations will be reviewed and the decision made whether the certificates will be issued. Final action is vested in the N.S.R.B. by Executive Order of the President which requires the chairman of the Resources Board to determine whether and to what extent a particular facility is an emergency facility under the law."

THIS CONVEYOR BELT, said to be the largest ever built and shipped in one piece, will bring iron ore from ship to shore at the Baltimore & Ohio's new ore dock at Baltimore, Md. Manufactured by the B. F. Goodrich Company, Akron, Ohio, the roll is 15 ft. high, 48 in. wide and weighs 45,000 lb.

Vore Joins Plowman Staff

Kenneth L. Vore, director of transportation for the Los Angeles, Cal., Chamber of Commerce, has been appointed consultant to Director E. G. Plowman of the Military Traffic Service, Department of Defense. Mr. Vore is a member of the board of directors of the National Industrial Traffic League, and of the policy administration board of the Transportation Association of America.

OVERSEAS

Colombia.—This country's National Railways reportedly have invited offers to supply 50 cars of 1 yd. gage for transporting sugar, according to Foreign Commerce Weekly. An additional 150 box, flat and tank cars also will be purchased. Offers may be submitted to Alberto Suarez Hoyos, Jefe, Departmento de Materiales, Consejo Administrativo de los F. C. Nacionales, Bogota, Colombia.

Egypt.—This country's State Railways, Telegraphs and Telephones Administration, according to a recent issue of Foreign Commerce Weekly, has submitted to the minister of communications a list of its financial needs (listed below in Egyptian pounds), for the following equipment and projects: £7,600,000 to cover 60 locomotives, 150 passenger coaches and 700 freight cars, together with spare parts; £3,800,000 for railroad ties; £3,000,000 for stores and supplies; £2,000,000 for a new pipeline between Suez and Cairo; and £4,200,000 for telegraph and telephone equipment. The administration wants the equipment delivered by February 28, 1954. The method by which purchases will be made has not been decided.

Germany.—A special 15-car "Marshall Plan" train is now on a 3,000-km. (approximately 1,875-mi.) tour of northwest Germany, to bring the story of postwar economic recovery to an estimated 25 million Germans. Scheduled to visit more than 100 cities, the train carries special displays of new German products and export goods, with posters and charts outlining progress

International Steel

SALUTES

THE MILWAUKEE ROAD

CHICAGO MILWAUKEE ST. PAUL AND PACIFIC

Age is an intangible measured by achievement. Counting time is not as important as making time count! And it is our own personal experience that suggests the *Milwaukee Road*'s 100th year might better be said: "*One Million Friends Old!*"

THE INTERNATIONAL UNDERFRAME

A much sturdier underframe incorporating a maximum utilization of material section with minimum weight.

THE INTERNATIONAL BULK-LADING SIDE DOOR

The all-purpose door which utilizes inter pressure to seal bulk lading without au iary protection. Positively interlocked t and bottom eliminates door loss.

OTHER PRODUCTS OF INTERNATIONAL STEEL C RAILWAY DIVISION

- House car sides
- Side and end Ladders
- Stainless steel flooring, bulkheads and fixtures for refrigerator cars

INTERNATIONAL STEEL COMPANY

Railway Division • Evansville 7, Indiana

made during the first two years of Economic Cooperation Administration activity. The displays are designed to show the individual German his personal stake in the recovery program, through more jobs, better housing, more food and clothing, and generally higher standards of living.

New Zealand. — This country's Ministry of public works has invited bids from United States firms for construction of approximately 5 mi. 37.33 chains of single-track concrete-lined railway tunnel, together with about 1 mi. 75 chains of approach formation, according to a recent issue of Foreign Commerce Weekly. Plans and specifications are available from the New Zealand Government Trade Commissioner, Dupont Circle Building, 1346 Connecticut Ave., N. W., Washington 6, D. C.

ORGANIZATIONS

Association Formed by Railway Track Contractors

Following several meetings held in Chicago during the past year, announcement has been made of the formation of the Associated Railway Track Contractors of America, to represent track contractors throughout the United States.

The new organization will hold its annual meetings in Chicago during the month of October, the announcement said. Temporary offices have been set up at 111 West Washington street, Chicago. Officers elected at the most recent meeting of the group include Royce Kershaw, Montgomery, Ala., president and director; Murray Bailes, Jacksonville, Fla., vice-president; John Deckert, Chicago, secretary and director; M. F. Longwill, St. Louis, Mo., treasurer; and Charles D. Kelly, St. Louis, A. S. Wikstrom, Skaneateles, N. Y., and T. F. Scholes, Reading, Pa., directors.

Railway Business Women's Silver Anniversary

The Railway Business Women's Association of Chicago will celebrate its silver anniversary at a reception and dinner-dance to be given at the Drake Hotel on November 18. Guest speaker at the dinner will be Walter Dietze, public relations officer of the Chicago, Milwaukee, St. Paul & Pacific. Guests will include Sarah Barker, of Minneapolis, Minn., national president, and all past presidents of the Chicago chapter. Delegates from association chapters in Minneapolis and St. Paul, Cleveland, Ohio, Buffalo, N. Y., Cincinnati, Ohio, Detroit, Mich., Kansas City, Mo., Indianapolis, Ind., Philadelphia, Pa., and St. Louis, Mo., will attend the celebration, along with members from newly formed chapters in New Orleans, La., and New York.

Numerous railroad officers have been invited to attend.

Following a "brunch" for out of town guests at the Edgewater Beach Hotel on November 19, the national organization will select a site for a residence for retired railroad women, a proposed undertaking by the national organization which will be voted upon by its board next January in Chicago.

R. B. A. Dinner

The 42nd annual meeting and dinner of the Railway Business Association will be held on November 17, at the Waldorf-Astoria Hotel, New York. Karl R. Bendetsen, assistant secretary of the United States Army, will present an address entitled "Crusade for Peace."

Daniel A. Hackett, city freight agent of the New York Central, was installed as president of the **Traffic Club of Brooklyn, N. Y.,** at its November 2 meeting. Mr. Hackett, formerly vice-president, succeeds Benjamin B. Kaplan, traffic manager of Valentine & Co., retiring president. Vincent Choucherie, manager of the Waring Central Company, has been elected vice-president.

The **National Railway Historical Society, Inc.,** at the recent annual meeting of its board of directors, re-elected E. G. Hooper of Baltimore, Md., as president. Other officers are: Vice-president, membership, E. L. Pardee, Collingswood, N. J.; vice-president, field trips, James Dillon, Philadelphia, Pa.; secretary, James S. Myers, Philadelphia; treasurer, Hugh R. Gibb, Newark, Del.; vice-president, coordination, Roy M. Zimmerman, Buffalo, N. Y.; and editor, Leon R. Franks, Lancaster, Pa.

The 35th annual dinner of the **Traffic Club of Minneapolis** will be held on December 7, in the Hotel Nicollet, at 6:30 p.m. Edward Everett Horton, stage, screen and radio comedian, will be the speaker for the evening.

Speakers at the November 16 meeting of the **New York Railroad Club** will be three railroad presidents, J. Russel Coulter of the Toledo, Peoria & Western, W. S. Hackworth of the Nashville, Chattanooga & St. Louis, and Paul W. Johnston of the Erie. The new motion picture, "The Hoosier Line," produced by the Chicago, Indianapolis & Louisville, will be shown.

CONSTRUCTION

Contracts Awarded for Canadian Ore Line

Contracts for construction of a new railroad line, some 360 miles in length, from Seven Islands, Que., on the Gulf of St. Lawrence, to the new Quebec-Labrador iron ore fields, have been awarded to a group of Canadian contractors, which includes the Cartier Construction Company, of Montreal, Que., the McNamara Construction Company, of Toronto, Ont., Fred Mannix & Co., of Calgary, Alta., and the Morrison-Knudsen Company of Canada.

The new railway, presently known as the Quebec, North Shore & Labrador, is headed by J. R. Timmins, of Montreal, who is also president of the Labrador Mining & Exploration Co., which, with a number of companies in the United States, has been instrumental in exploring and promoting development of the new ore fields. Equipment for railway construction is now reported to be moving to the vicinity of Seven Islands, and some work may be begun before winter. The railroad is scheduled for completion in 1954, with ore shipments — expected eventually to total about 10 million tons per year—slated to begin in 1955.

SUPPLY TRADE

William E. McCoy, district representative for the **Caterpillar Tractor Company** in the Eastern division, has been appointed assistant sales manager of the Central division, succeeding **Herman Eberling,** who recently went on active duty as a captain in the U. S. Army Corps of Engineers.

M. B. Garber has been appointed director of sales for the **Thew Shovel Company,** Lorain, Ohio. **J. T. Cushing** has become sales manager in complete charge of all domestic sales except those to the federal government. **Q. J. Winsor** has relinquished his present duties as assistant general manager and assumed a new position under the general manager with the title of manager of development sales.

Arthur W. Carlquist, assistant to sales vice-president of the **Gerrard Steel Strapping Company** (a **United States Steel Corporation** subsidiary), has been appointed general sales staff manager at Chicago. **Harry M. Reed,** chief packaging and stowage engineer in the company's Chicago headquarters, has become Chicago division manager, a newly-created position.

The **Union Carbide & Carbon Corp.** has announced the formation of the **Oxweld Railroad Service Division,** which will conduct the business of the **Oxweld Railroad Service Company.** The latter company has been dissolved, and all of its assets have been transferred to its parent corporation.

John Hellstrom, vice-president of the **American Air Filter Company,** Louisville, Ky., has been transferred to San Francisco, Cal., as manager of the newly-created Pacific division, which

includes California, Oregon, Washington, Idaho, Montana, Utah, Arizona, New Mexico and western Texas. Business activities of both American Air Filter and the Herman Nelson division, of Moline, Ill., in Pacific territory, will be under his direct supervision. **Robert H. Walpole, Jr.,** formerly engineering supervisor of the dust and fume control division at San Carlos, Cal., will be one of Mr. Hellstrom's assistants.

Ray A. Burt, sales representative in the Pacific coast district for the Ramapo Ajax Division of the **American Brake Shoe Company,** has been appointed Pacific coast district sales manager, with headquarters as before at Los Angeles, Cal.

Hunter Michaels, whose election as vice-president of the **American Locomotive Company** was announced in *Railway Age* of November 4, began his business career in 1903 with the National Dump Car Company, while continuing his education at Armour Institute and Lewis Institute, Chicago. In 1906 he joined the American Car & Foundry Co. and in 1907 the Hart-Otis Car Company. He was associated with the Rodger Ballast Car Company from

Hunter Michaels

1908 to 1913 and in the latter year joined the Union Metal Products Company. Mr. Michaels was commissioned a lieutenant in the United States Army in 1917 and, at the end of World War I, returned to Union Metal. He joined the Chicago sales office of the Railway Steel Spring Company in 1923; three years later, when this company was purchased by American Locomotive, he continued as a sales representative. In 1935 he was appointed Alco's district sales manager at Cleveland, Ohio. He has been a director of the Railway Steel Spring division since 1944.

OBITUARY

George Sessions Case, chairman of the executive committee of the Lamson & Sessions Co., died recently. He was 68 years old.

EQUIPMENT AND SUPPLIES

FREIGHT CARS

21,893 Freight Cars Ordered In Oct.; 5,501 Delivered

Freight-train cars ordered last month for domestic use totaled 21,893, including 4,816 ordered from railroad shops, compared with September orders for 25,611, which included 5,703 ordered from railroad shops, the American Railway Car Institute has announced. Freight-train cars delivered in October, the institute said, numbered 5,501, including 3,057 delivered by railroad shops, compared with September deliveries of 5,131, which included 2,736 delivered by railroad shops.

The backlog of freight-train cars on order on November 1 was 122,488, including 37,197 on order from railroad shops, compared with a backlog of 106,611 on October 1 and 17,377 on November 1, 1949.

The **American Refrigerator Transit Company,** a jointly owned subsidiary of the Missouri Pacific and the Wabash, has ordered 500 refrigerator cars from its own St. Louis, Mo., shops. The cars will cost $5,000,000.

The **Burlington Refrigerator Express Company** has ordered 350 refrigerator cars from the Chicago, Burlington & Quincy's Havelock (Neb.) shops. Delivery is scheduled for 1951.

The **Canadian Pacific** has placed orders for 4,575 freight cars for 1951 delivery. The orders were divided as follows: Canadian Car & Foundry Co.—1,900 50-ton box, 350 automobile box and 100 flat cars; National Steel Car Corporation—800 50-ton box, 350 refrigerator and 50 covered hopper cars; and Eastern Car Company—500 50-ton box, 300 drop-end gondola and 225 longitudinal hopper cars.

The **Chicago, Burlington & Quincy** has ordered 1,000 box, 400 flat, 200 hopper and 250 gondola cars from its Havelock (Neb.) shops for delivery next year. Authority to acquire this equipment, plus the 350 refrigerator cars reported elsewhere in this column as ordered by the Burlington Refrigerator Express, was reported in *Railway Age* of October 7, page 88.

The **Chicago Great Western** has ordered a total of 1,050 freight cars including 600 box cars and 300 gondolas from the Pullman-Standard Car Manufacturing Company and 150 flat cars from the American Car & Foundry Co.

The **Colorado & Southern** has ordered 250 box cars from the Havelock (Neb.) shops of the Chicago, Burlington & Quincy. Authority to acquire this equipment was reported by *Railway Age* on October 7, page 88.

The **Fort Worth & Denver City** has ordered 250 box cars from the Havelock (Neb.) shops of the Chicago, Burlington & Quincy. Plans to acquire this equipment were reported in *Railway Age* of October 7, page 88.

The **Minneapolis & St. Louis** has ordered 700 50-ton box cars and 100 50-ton flat cars from the General American Transportation Corporation for delivery in the second quarter of 1951. Authorization to purchase this equipment was reported in *Railway Age* of October 14, page 57.

The **Spokane, Portland & Seattle** has ordered 200 50-ton 52-ft. flat cars from the Pacific Car & Foundry Co. for delivery beginning next July.

The **Western Pacific** has ordered 600 50-ton box cars from the Pullman-Standard Car Manufacturing Company at an approximate cost of $3,250,000. Three hundred of the cars are scheduled for delivery in September, 1951, and 300 in October. The road's intention to order 500 box cars was reported in *Railway Age* of September 16, page 84.

PASSENGER CARS

The **Consolidated Railroads of Cuba** have ordered 12 rail Diesel cars, (seven 90-passenger RDC-1's and five 71-passenger RDC-2's with 17-ft. baggage sections) from the Budd Company. Deliveries are scheduled to begin early next January. The cars are for service on subsidiaries of the Consolidated of Cuba: the Cuba, the Cuba Northern, and the Guantanamo & Western.

The Spokane, Portland & Seattle has ordered two sleeping cars and one 48-passenger coach from the Pullman-Standard Car Manufacturing Company. The cars will go into service between Portland, Ore., and Chicago.

LOCOMOTIVES

The Chicago, Rock Island & Pacific has ordered eight 3-unit 4,500-hp. Diesel-electric freight locomotives and six 2,250-hp. passenger units from the Electro-Motive Division of General Motors Corporation. Delivery of the freight locomotives is scheduled for May, 1951, while three of the passenger units will be received in June, 1951, and the other three in July. Authority to acquire this equipment was reported in *Railway Age* of August 19, page 54.

The **Louisville & Nashville** has ordered 22 1,500-hp. general purpose and 4 2,250-hp. passenger Diesel-electric locomotive units from the Electro-Motive Division of General Motors Corporation. Deliveries of the 1,500-hp. units, intended primarily for passenger

(Continued on page 103)

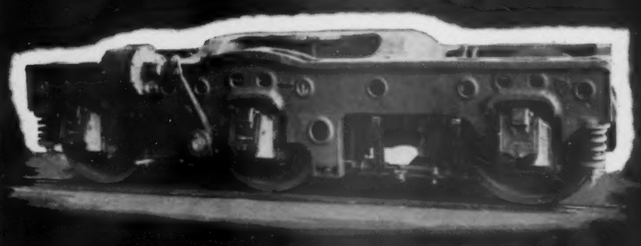
COMMONWEALTH

CAST STEEL UNDERFRAMES

AND MOTOR TRUCKS

For Diesel Locomotives

Commonwealth one-piece
Cast Steel Underframe



Commonwealth
6-wheel Motor Truck

Assure

- Great Strength
- Low Upkeep Cost
- Dependable Performance

Baldwin-Westinghouse
Diesel Road Switcher

For every type of Diesel—passenger, freight or switcher—COMMONWEALTH trucks for many years have proven their outstanding dependability and maintenance economy. They provide minimum weight with exceptional strength.

The one-piece cast steel construction of COMMONWEALTH underframes provides great inherent strength and permanent durability to withstand the severe shocks of switching and road service. They are furnished completely machined and ready for application, increasing production output. In the event of collisions, damage to power plants is greatly minimized.

COMMONWEALTH UNDERFRAMES and TRUCKS provide maximum availability for your Diesel power.

GENERAL STEEL CASTINGS

GRANITE CITY, ILL. • EDDYSTONE, PA.

SALUTE

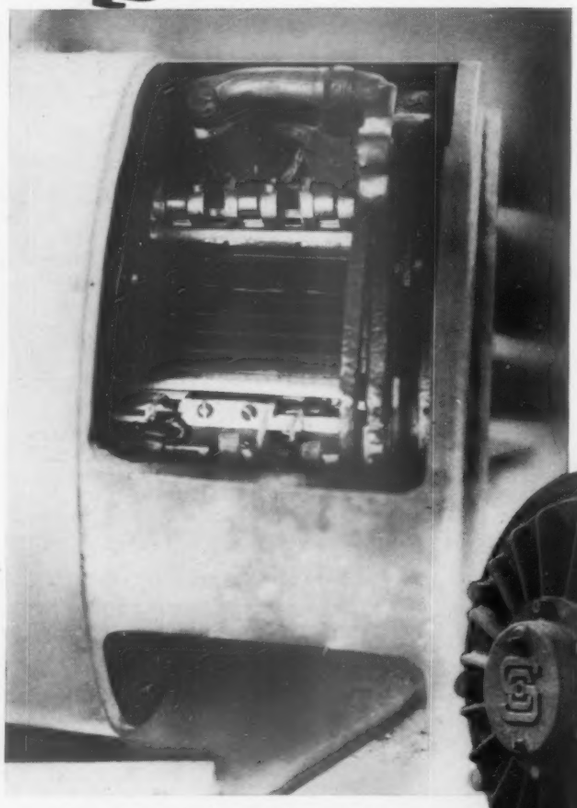
to 100 Years of Service

The Safety Company salutes the Chicago, Milwaukee, St. Paul and Pacific Railroad Company on its one hundredth year of railroading. During the past half-century we have had the privilege to assist the Milwaukee Road with its progressive improvements in passenger comfort.

We are proud of the record our equipment has attained . . . providing dependable lighting and air conditioning throughout the years for the Milwaukee Road. An example of this service is shown in our illustration below. The 10KW Type GB10550 Generator was removed recently from a Milwaukee diner no longer in passenger service. This Generator has been in use since 1934, when the car was first air conditioned. Today, it is still in excellent condition . . . capable of rendering many more years of reliable service.

•

It is these many more miles of profitable operation which have established the performance record of Safety Company equipment on America's foremost railroads.



View of commutator end of Generator. Note excellent condition.

Unretouched photo of Generator after 16 years of continuous service.

THE SAFETY CAR HEATING AND LIGHTING COMPANY INC.

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SAFETY COMPANY PRODUCTS INCLUDE: Complete Air-conditioning Equipment • Genemotors • Generators • Fans • Regulators • Lighting Fixtures • Switchboards • Parcel Racks • Generator Drives • Motor Alternators

(Continued from page 100)
service, are expected to begin next January and be completed in May. The other units are scheduled for delivery next June and July. The road's intention to purchase this equipment was reported in *Railway Age* of October 7, page 88.

The **Minneapolis, St. Paul & Sault Ste. Marie** has ordered 20 Diesel-electric locomotive units costing $2,815,000. Two 2-unit 3,000-hp. passenger locomotives, three 2-unit 3,000-hp. freight locomotives and two 1,500-hp. road-switching units were ordered from the Electro-Motive Division of General Motors Corporation; two 1,500-hp. road-switching units from the Baldwin Locomotive Works; and one 1,500-hp. road-switching unit and five 1,000-hp. switching units from the American Locomotive-General Electric Companies.

The **Spokane, Portland & Seattle** has ordered four 1,600-hp. Diesel-electric locomotive road-switching units from the American Locomotive-General Electric Companies for delivery next month.

SIGNALING

The **Lehigh Valley** has ordered from the General Railway Signal Company equipment to install a type H, class M remote control system at Phillipsburg, N. J. The present control machine at Easton, Pa., will be expanded by addition of a 10-in. panel with 14 track lights and 6 levers for control of 3 switch machines and 16 signals. Included in this order are model 5D switch machines and type SA searchlight signals.

ABANDONMENTS

Chicago & North Western.—I.C.C. Examiners Jerome K. Lyle and H. J. Blond have recommended that Division 4 deny this road's application for authority to abandon its Scribner-Oakdale branch line, extending approximately 114 mi. between Scribner, Neb., and Oakdale. The examiners found that the line "has had definite feeder value" to the C.&N.W. in the past, and that there is assurance of a satisfactory flow of traffic involving the area served by the line. The present absence of all-weather highways in the area indicates the public's reliance upon railroad service, they said.

Minneapolis & St. Louis.—The I.C.C. has postponed for an indefinite time the effective date of a recent order authorizing this road to abandon 9.5 mi. of branch line between Newburg, Iowa, and Laurel. The commission's action was taken after parties protesting the abandonment filed a petition for further hearing and reconsideration of the Division 4 order.

FINANCIAL

Rutland Reorganization Completed November 1

Reorganization of the 407-mi. Rutland Railroad Company, which had been in receivership since May 5, 1938, was completed as of 12:01 a.m. on November 1, with transferral to the new Rutland Railway Corporation of ownership and operation of all properties formerly owned by the old company and operated by that company's trustees.

The reorganization was accomplished in accordance with a plan approved by the I.C.C. on December 11, 1946, as modified March 17, 1948. (See *Railway Age* of December 28, 1946, page 1093, and March 27, 1948, page 74.) The plan establishes the new company's capitalization at $10,993,000, represented by 49,818 shares of preferred stock and 60,112 shares of common stock, all of $100 par value. The former company, capitalized at $18,296,300, had fixed interest charges of approximately $386,000 per year, which were eliminated, as were its old preferred and common stocks, by the reorganization.

As reported elsewhere in this issue, William E. Navin, trustee of the former railroad company, has been elected president of the new railway corporation, while all other officers and employees will continue in their respective positions.

Directors of the new company, all Vermonters, are, in addition to Mr. Navin, Gardner A. Caverly, of Ascutney, Wallace M. Fay, of Proctor, Irwin K. French, of Middlebury, William I. Ginsburg, of Rutland, Herbert C. Gates, of Bennington, Leon S. Gay, of Cavendish, Lloyd W. Moore, of Burlington, and Lewis A. Putnam, of Montpelier. Messrs. Caverly, Fay, and Ginsburg will also serve as voting trustees for the new preferred stock under a five-year voting trust provided for in the modified reorganization plan; while Messrs. French, Gates and Gay will act in a similar capacity with respect to the new common stock. Messrs. Caverly and Ginsburg, along with Hubert Atwater, Jr., of New York, will act as voting trustees for stock of the Rutland Transit Company.

Early this year, as reported in the *Railway Age* of January 14, page 40, the Rutland celebrated the 100th anniversary of the operation of its first train, by issuance of a special booklet reviewing the history of the company up to that date.

Missouri Pacific.—*Reorganization.*—In a notice to the various parties in this reorganization case, the I.C.C. has advised them that about December 1 it will submit the court-approved plan of reorganization to security holders for acceptance or rejection. Holders of securities on December 1 will be entitled to vote on the plan, the commission said. Ballots of acceptance or rejection must be placed in the mail not later than January 15, 1951, except for persons outside the continental United States who will have until January 30.

New York, New Haven & Hartford.—*Subsidiary Sells Interest in Bus Company.*—The New England Transportation Company, a subsidiary of the New York, New Haven & Hartford, has sold to New England Greyhound Lines the one-half stock interest, which N.E.T. owned in N.E.G.L. H. Peirce Brawner, Greyhound president, reportedly said I.C.C. approval was not necessary because the railroad subsidiary's stock was non-voting.

New York, Susquehanna & Western.— *Reorganization.* — Modifying a recent order in this case, the I.C.C. has increased to $55,000 the maximum limit that may be paid for services rendered by special counsel to this road's trustee during the period from January 1, 1947, to March 31, 1950. As noted in *Railway Age* of September 2, page 98, the sum previously fixed by the commission was $40,000.

Norfolk & Western.—*Acquisition.*—This road has applied to the I.C.C. for authority to acquire and operate the Cloverdale & Catawba, an 8.8-mi. line extending from a connection with the N.&W. near Cloverdale, Va., to the headwaters of Tinker Creek. The C.&C. is owned by the Lone Star Cement Corporation, which is constructing a large cement plant near the end of the line. The plant is expected to begin operations early in 1951. This road expects to move about 200,000 tons of cement from the plant annually, as well as handling the inbound movement of "substantial quantities" of coal and other commodities. The application to the I.C.C. said the N.&W. and the cement company have agreed on the purchase price, but the price was not stated.

Southern.—*Acquisition of Richmond & Mecklenburg.*—Examiner J. S. Prichard, in his second proposed report in this case, has now recommended that the I.C.C. approve this road's application for authority to acquire the R.&M., its former lessor. The examiner found that the transaction "would appear to be in the public interest" if the commission required the Southern to agree to purchase all outstanding R.&M. stock at $52 a share. There are a total of 618-21/30 shares outstanding in the hands of the public, but as of June 16 only 76-5/6 of these were known to be in existence. The Southern owns the balance of the R.&M.'s stock, 3,008-1/3 shares, as well as the latter's first mortgage bonds.

The R.&M. is a 31.2-mi. line between Keysville, Va., and Clarksville Junction. The Southern operated the line under a 50-year lease from 1898. In 1948, while continuing to operate the line, the Southern proposed to acquire the properties of the road, and

dissolve the company. Examiner Prichard's first proposed report, issued in January of this year, recommended denial of the Southern's application on the basis that it would not be in the public interest. The Southern had shown the R.&M. to have been operated at a deficit, and the examiner said it would not be in the public interest to place this drain upon the resources of the Southern. (See *Railway Age* of January 14, page 49.) The Southern subsequently asked for further hearing in the case, which the I.C.C. granted.

Examiner Prichard's present conclusions in favor of the purchase were reached after the Southern introduced further evidence designed to show R.&M.'s value as a feeder road and its value as a cut-off for handling bridge traffic between Keysville and Durham, N. C. The $52 per share value placed on the R. & M. stock by the examiner was based on six times the net earnings realized by the Southern from operation of the R.&M. as a feeder.

Suncook Valley.—*Purchase.*—Division 4 of the I.C.C. has approved this road's request for authority to purchase approximately 5 mi. of Boston & Maine trackage between Suncook, N. H., and Bow Junction. The 5-mi. line, known as the Suncook loop, has been operated by this road under lease since 1936. Purchase price of the segment, approved by Division 4, is $12,000.

New Securities

Application has been filed with the I.C.C. by:

CHICAGO & EASTERN ILLINOIS.— To assume liability for $3,270,000 of series H equipment trust certificates, to finance in part four Diesel-electric locomotives and 700 new box cars, as follows:

	Description and Builder	Estimated Unit Cost
4	1,500-hp. road-switching locomotives (Electro-Motive Division, General Motors Corporation)..	$145,491
300	box cars (Eastern Illinois Equipment Company, a subsidiary of C. & E. I.)	5,000
200	box cars (American Car & Foundry Co.)	5,000
200	box cars (Pullman-Standard Car Manufacturing Company)	5,000

Total cost of the equipment is estimated at $4,100,000. The certificates, to be dated December 1, would mature in 30 semiannual installments of $109,000 each, beginning June 1, 1951. Subject to the commission's approval, the issue has been awarded to Halsey, Stuart & Co. and associates. This group submitted a bid of 99.06916 with a 2¾ per cent interest rate.

Division 4 of the I.C.C. has **authorized:**

CHESAPEAKE & OHIO.—To assume liability for $7,950,000 of equipment trust certificates, to finance in part 1,900 new freight cars, costing an estimated $10,045,681.50. (See **Railway Age** of October 7, page 90.) The certificates will be dated November 15, and will mature in 30 semiannual installments of $265,000 each, beginning May 15, 1951. Winning bid for the issue was that of Salomon Bros. & Hutzler and three associates, who bid 99.713 with interest at the rate of 2½ per cent. This will make the average annual cost of the proceeds to the C. & O. approximately 2.54 per cent. The certificates were reoffered to the public at prices yielding from 1.6 to 2.65 per cent, according to maturity.

CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC.—To assume liability for $5,430,000 of series MM equipment trust certificates to finance in part 34 Diesel-electric locomotives (52 units), costing an estimated $7,242,067.47. (See **Railway Age** of October 7, page 92.) The certificates, to be dated November 1, will mature in 30 semiannual installments of $181,000 each, beginning May 1, 1951. Division 4's report approved a selling price of 99.559 with interest at 2½ per cent—the bid of Salomon Bros. & Hutzler and three associates—which will make the average annual cost of the proceeds approximately 2.57 per cent. The certificates were reoffered to the public at prices yielding from 1.65 to 2.65 per cent, according to maturity.

Security Price Averages

	Nov. 6	Last week	Last year
Average price of 20 representative railways stocks	46.86	46.92	39.30
Average price of 20 representative railway bonds	92.93	94.55	87.26

Dividends Declared

Atlanta & West Point.—$2, year end, payable December 15 to holders of record December 5.

Maine Central.—5% preferred, $1.25, accumulated, payable December 1 to holders of record November 15.

Montgomery & Erie.—17½¢, semiannual, payable November 10 to holders of record November 1.

New York Central.—$1, payable December 27 to holders of record November 24.

Norfolk Southern.—75¢, quarterly, payable December 15 to holders of record December 1.

RAILWAY OFFICERS

EXECUTIVE

Henry F. McCarthy, formerly vice-president—traffic of the NEW YORK, NEW HAVEN & HARTFORD, has been elected vice-president and director of SEATRAIN LINES, INC., with headquarters in New York.

J. Reginald McMillan has been promoted to vice-president, Western region, of the CANADIAN NATIONAL, succeeding **J. P. Johnson,** who has retired on account of ill health, as reported in the September 30 *Railway Age*. Mr. McMillan was born on September 1, 1905, at Winnipeg, Man., at which point he started his career with the C. N. in 1925 in the general passenger agent's office. The following year he was transferred to the office of the general manager, and in 1929 was made secretary to the vice-president, Western region. In 1938 he was appointed assistant superintendent at Mirror, Alta., and in 1939 was transferred to Edson, Alta., with the same title. Later that year he served as acting assistant to vice-president of operation at Montreal, Que., being again appointed assistant superintendent in 1941, with headquarters at Edmonton, Alta. From 1944 to 1947, Mr. McMillan served as superintendent at that point, subsequently returning to Winnipeg as assistant to the general manager of the Western region. He was appointed general superintendent of the Manitoba district, at Winnipeg, in 1949, from which position he was recently promoted.

J. Reginald McMillan

Mr. Johnson was born at Castlebar, Que., in 1889. He began service in 1905 with the Grand Trunk (now part of the C. N.) as a telegrapher, being detailed to various points between Portland, Me., Levis, Que., and Montreal until 1908, when he became a dispatcher at Island Pond, Vt. In 1915 he was appointed chief train dispatcher and trainmaster for the National Transcontinental (now part of the C.N.) at Grant, Ont. Two years later he was made general superintendent of the Canadian Government Railways at Cochrane, Ont. Mr. McMillan became inspector of transportation at Winnipeg in 1919, and assistant superintendent at Melfort, Sask., in 1920. He served as superintendent at Prince Albert, Sask., Saskatoon, Dauphin, Man., and Calgary, Alta., until 1936, at which time he was promoted to general superintendent, Northern Ontario district, at North Bay, Ont. In 1941 he was transferred as general superintendent to the Southern Ontario district, and in 1942 became chief of transportation for the system at Montreal. He was appointed vice-president and general manager of the Atlantic region in 1944, with headquarters at Moncton, N. B., becoming vice-president of the Western region in 1948.

J. P. Johnson

Thomas Butler, assistant to vice-president in charge of operations of the CHICAGO & NORTH WESTERN at Chicago, has retired after nearly 47 years of service. **Frank E. Christofferson,** chief clerk in the office of the general

The bundle of sticks

A wise old man called his quarrelsome sons about him. Taking up a bundle of sticks, he commanded each in turn to break the sticks. All tried, but in vain, and said it could not be done.

"And yet, my boys, nothing is easier to do," said the father, as he undid the bundle and broke the sticks, one by one. "By this example, you can see that united you will be more than a match for your enemies; but if you quarrel and separate, your weakness will put you at the mercy of those who attack you."

The useful truth of this fable is just as timely today as it was when the Greek ex-slave Aesop told it 2,500 years ago. You, a patriot, believing in individual liberty and freedom for all, see our American way of life threatened by the menace of communism abroad and jeopardized at home by complacence, negligence, confusion and incompetence.

As a business leader in your own community, you have a particular responsibility to help unify your fellow citizens and guide their thinking and action--for the strengthening and preservation of the ideals that built America, in fact, made America the envy and goal of the very individuals now seeking to destroy it. *In Union there is Strength.*

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manager and vice-president of operations at Chicago, becomes Mr. Butler's successor. Mr. Butler joined the North Western in 1903 as a clerk at North Fond du Lac, Wis., and in 1911 moved to Chicago as assistant chief clerk in the office of the general manager. He was appointed assistant to vice-president in 1945.

W. E. Navin, trustee of the RUTLAND, has been elected president of the newly-reorganized railway, with headquarters as before at Rutland, Vt.

P. R. Elfstrom, vice-president and general manager of the CHICAGO, AURORA & ELGIN, with headquarters at Wheaton, Ill., has been appointed vice-president and chief engineer.

Verl E. McCoy, formerly with the Mutual Engineering Service Company, has been appointed assistant to vice-president—finance and accounting department, of the CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC, with headquarters at Chicago.

FINANCIAL, LEGAL & ACCOUNTING

As reported by *Railway Age* on October 7, **Herbert S. Anderson** has been promoted to general counsel of the PULLMAN COMPANY, with headquarters at Chicago. Mr. Anderson is a native of Charleston, Ill., and received his early education in that city. He later attended the Eastern Illinois State Normal School and the University of Illinois. In 1930 he was admitted to the bar and soon afterward was elected judge of the city court of Charleston. In 1932-35 he sat on the Cook County (Ill.) Circuit bench as a visiting judge. Mr. Anderson joined Pullman's law department in June, 1935, and in December, 1941, became general solicitor, which position he held at the time of his recent promotion.

Bosco B. Young, supervisor of contracts of the PENNSYLVANIA at Chicago, has retired. He is succeeded by **John J. Johnston,** assistant supervisor of contracts in the office of the vice-president at that point.

S. H. May, general auditor of the CANADIAN NATIONAL, has been appointed assistant comptroller, with headquarters as before at Montreal, Que. **M. D. Whitaker** has been appointed auditor of general accounts at Montreal.

C. B. McClelland has been appointed land commissioner of the ATCHISON, TOPEKA & SANTA FE, succeeding the late **E. O. Hemenway,** whose death is reported elsewhere in this issue.

F. G. Sweeney, acting treasurer and comptroller of the RUTLAND, has been elected treasurer of the newly-reorganized railway, with headquarters as before at Rutland, Vt. **M. S. Gooding,** secretary, has been elected clerk and assistant treasurer.

OPERATING

Charles E. Yarnell, who has been promoted to superintendent of the NEW YORK, CHICAGO & ST. LOUIS' Clover Leaf district, with headquarters at Frankfort, Ind., as reported in the October 14 *Railway Age,* was born in Henry county, Ohio, and started service with the Nickel Plate in August, 1920, as a brakeman out of Conneaut, Ohio, on the Buffalo division. In 1929 he came a conductor on the same division.

Charles E. Yarnell

and later served as assistant trainmaster for two months on that division. In 1942 he moved to the Cleveland division as assistant trainmaster, returning to the Buffalo division in 1944 as trainmaster. Mr. Yarnell was transferred back to the Cleveland division in October, 1946, as trainmaster at Conneaut, where he was located before his latest promotion.

M. S. Cogan, superintendent of the Boston division of the RAILWAY EXPRESS AGENCY, has been appointed assistant general manager of the New York City department, succeeding **James P. Downey,** who has been appointed general manager of the Allegheny department at Philadelphia, Pa. **Benjamin F. Weedon,** superintendent of organization at New York, has been appointed superintendent of the Boston division, succeeding Mr. Cogan. **J. E. Nolan,** supervisor of the security division, has been appointed superintendent of that division, general claim department, at New York, succeeding **A. B. Berry,** resigned.

Frank W. Flannigan, assistant general manager of the CHICAGO, AURORA & ELGIN, at Wheaton, Ill., has been advanced to general manager, with the same headquarters. **Leo L. Huntoon,** passenger traffic manager and public relations officer, succeeds Mr. Flannigan.

E. J. Brosseau, trainmaster of the ILLINOIS CENTRAL at Waterloo, Iowa, has been transferred in that capacity to Decatur, Ill., to succeed **Frank Walker,** who is retiring after more than 45 years of service. Mr. Brosseau is succeeded by **J. R. Sullivan,** trainmaster at Grenada, Miss., who is in turn replaced by **A. C. Ellzey, Jr.,** trainmaster at Jackson, Miss. **J. C. Black** succeeds Mr. Ellzey.

J. T. Hall, assistant superintendent of rules and safety of the ST. LOUIS SOUTHWESTERN at Pine Bluff, Ark., has been appointed assistant superintendent, at that point, succeeding **Athol Townsend,** who has retired after more than 50 years of continuous service with the Cotton Belt. **D. F. Carpenter** chief dispatcher at Pine Bluff, succeeds Mr. Hall.

L. F. Furlow has been appointed terminal trainmaster of the SOUTHERN PACIFIC at Lordsburg, N. M., and **H. W. Haas** has been assigned to a similar position at Carrizozo, N. M. **G. C. Townsend** has been made trainmaster at Tucumcari, N. M., succeeding **A. G. Bays,** who has been transferred to Fresno, Cal.

As reported in the *Railway Age* of October 21, **Wilbur F. Davis** has been appointed assistant general manager, Lines West district and Ohio Central Lines, NEW YORK CENTRAL SYSTEM, at Cleveland, Ohio. Mr. Davis was born at Strattonville, Pa., in 1899 and entered railroad service in 1918 as a telegraph operator with the N.Y.C.

Wilbur F. Davis

at Cleveland, where he subsequently served as train dispatcher and extra chief dispatcher. He was appointed trainmaster at Columbus, Ohio, in 1941; assistant to assistant general manager at Cleveland in 1946; assistant superintendent at Chicago later that year, and superintendent at Chicago in 1949.

E. W. Torian, superintendent, Lafayette division, of the SOUTHERN PACIFIC LINES IN TEXAS AND LOUISIANA, with headquarters at Lafayette, La., and New Orleans, has been promoted to general superintendent of transportation, with headquarters at Houston,

Tex. He is succeeded by **T. A. Greeson,** assistant superintendent at Lafayette. **G. W. Kelly** has been appointed superintendent of Houston terminals, to succeed **E. A. Kelley,** who, together with **C. T. McKittrick,** has been appointed assistant superintendent at Houston. **D. R. Kirk, Jr.,** has been appointed senior assistant superintendent at Houston, while **E. E. Barnett,** trainmaster at that point, becomes Mr. Greeson's successor. **O. W. Story,** trainmaster at Ennis, Tex., moves to San Antonio, as assistant superintendent, and is succeeded by **J. W. Germany. L. A. Patterson** and **J. O. Maddox** have been appointed trainmasters at Houston.

E. W. Torian

Mr. Torian was born on May 24, 1905, at Lafayette, and received his college education at Rice Institute, the University of Texas, and the South Texas School of Law. He began railroading in 1923, when he became employed during the summer months as a machinist helper with the Texas & New Orleans (part of the S. P) at Houston. In the summer of 1925 he served as apprentice clerk in the road's stores department. He began continuous service with the T. & N. O. in 1926, serving in various capacities in the stores department, as accounting department clerk, assistant chief clerk to superintendent, assistant yardmaster and yardmaster. Mr. Torian was advanced to assistant terminal trainmaster in 1937, and was transferred to Lafayette in 1941 as trainmaster. In 1943 he became assistant superintendent, and in July, 1948, was advanced to superintendent of the Lafayette division.

TRAFFIC

J. A. Golobick has been appointed general agent of the UNION PACIFIC at Oakland, Cal.

O. M. Smith, general agent of the FORT WORTH & DENVER CITY and the WICHITA VALLEY at Wichita Falls, Tex., has retired. He is succeeded by **E. C. Kuykendall,** who is in turn succeeded by **O. B. Sandidge,** general agent at San Antonio, Tex. **A. D. Dodge,** traveling freight and passenger agent, with headquarters at Wichita Falls, replaces Mr. Sandidge.

C. W. Rankin, assistant general freight agent of the CHARLESTON & WESTERN CAROLINA, has been appointed general freight agent, with headquarters as before at Augusta, Ga.

William S. Schugardt, district freight representative of the BALTIMORE & OHIO at Buffalo, N. Y., has been appointed division freight agent at Du Bois, Pa., succeeding **Walter C. Austin,** who recently retired after 50 years of service with the B. & O.

R. A. Stewart has been appointed general agent of the NEW YORK CENTRAL at Albany, N. Y., succeeding **W. P. Hofmann,** deceased.

Arthur R. Walton has been promoted to freight traffic manager of the ERIE at New York, as was reported in the *Railway Age* of November 4. Mr. Walton was born at New York on January 26, 1886. He spent 22 years in various clerical capacities with the Erie until 1924, when he was named city

Arthur R. Walton

freight agent at New York. Later he was advanced to division freight agent at Jersey City, N. J., and Paterson; and general agent at Newark, N. J., and Akron, Ohio. He was promoted to assistant freight traffic manager at New York on December 1, 1945.

Frank J. Kelly has been appointed general agent of the CHICAGO SOUTH SHORE & SOUTH BEND at Chicago.

Robert C. Courtney has been appointed assistant freight traffic manager of the SOUTHERN at Raleigh, N. C., as was reported in the *Railway Age* of October 28. Mr. Courtney was born on December 8, 1899, in Texas. He attended the public schools of Lufkin, Tex., and was graduated from Tyler Commercial College in 1920. He entered the service of the Southern in November, 1922, as chief clerk to commercial agent at Shreveport, La., transferring to Dallas, Tex., in March, 1925. He was promoted to freight traffic representative at Montgomery, Ala., on February 1, 1939, and in July of the same year was appointed district freight and passenger agent at Shreveport, transferring in September, 1941, to Little Rock, Ark. He was promoted to division freight agent at Memphis, Tenn., in December, 1945, which position he held until his recent appointment.

MECHANICAL

C. J. Williams, assistant master mechanic of the SOUTHERN PACIFIC at West Oakland, Cal., has been advanced to master mechanic at Bakersfield, Cal. **L. P. Oberkamp,** assistant master mechanic at Los Angeles, Cal., has been promoted to master mechanic at Dunsmuir, Cal., succeeding **H. T. Ankerson,** who has been recalled to military service.

PURCHASES & STORES

Charles L. Foust, supervisor scrap and reclamation of the ILLINOIS CENTRAL at Burnside, Ill., has been appointed district storekeeper at that point, succeeding **F. P. Dugan,** who is on leave of absence because of illness.

As reported in the October 7 *Railway Age*, **Lewis Harris Warren** has been advanced to general storekeeper of the ST. LOUIS SOUTHWESTERN, with headquarters at Pine Bluff, Ark. Mr. Warren was born in Pine Bluff on May 31, 1905. He completed his high school education in 1922, and in February, 1923, joined the Cotton Belt as

Lewis Harris Warren

a laborer in the store department in his home town. He was made stock clerk in 1924, and from 1931 to 1933 worked as file clerk and timekeeper, subsequently becoming platform foreman. He served as lumber yard and scrap dock foreman from 1940 to 1949, and was later appointed assistant to general storekeeper, the position he held prior to his recent promotion.

Elwin L. Jensen, who has been advanced to assistant general storekeeper of the NORTHERN PACIFIC at St.

Paul, Minn., as reported in the October 28 *Railway Age*, was born on June 30, 1903, at Elk Point, S. D. Mr. Jensen began service with the N. P. in September, 1922, at Auburn, Wash. He was appointed chief clerk to the assistant general storekeeper at South Tacoma, Wash., in April, 1940, and in November, 1945, was advanced to assistant district storekeeper at Brainerd, Minn. From April, 1946, to August, 1948, he served as division storekeeper at Glendive, Mont., subsequently becoming material supervisor at St. Paul. Mr. Jensen held the latter position at the time of his promotion.

E. J. Becker, assistant general purchasing agent of the SOUTHERN PACIFIC at San Francisco, Cal., has retired after 46 years of railroad service, 44 of which were spent with the S. P. Mr. Becker started his career with the S. P. in 1906 as a clerk in the Sacramento stores, and subsequently became assistant general storekeeper. In 1941 he was appointed assistant general purchasing agent at Washington, D. C., being transferred to San Francisco in that capacity in 1945.

As reported in the *Railway Age* of October 7, **C. I. Cavenaugh** has been appointed general storekeeper of the ATLANTIC COAST LINE at Wilmington, N. C. Mr. Cavenaugh was born at Newberry, S. C., and was educated in the Wilmington public schools and the University of Richmond. He entered A.C.L. service on August 14, 1920, as assistant storekeeper at Wilmington,

C. I. Cavenaugh

and has served as storekeeper at Jacksonville, Fla., and Montgomery, Ala., and as division storekeeper at Tampa, Fla. Mr. Cavenaugh served in the 703rd Railway Grand Division, U. S. Army, during World War II. Returning to the A.C.L. at Tampa as storekeeper on March 4, 1946, he was appointed assistant general storekeeper on March 1, 1950, which position he held until his recent promotion.

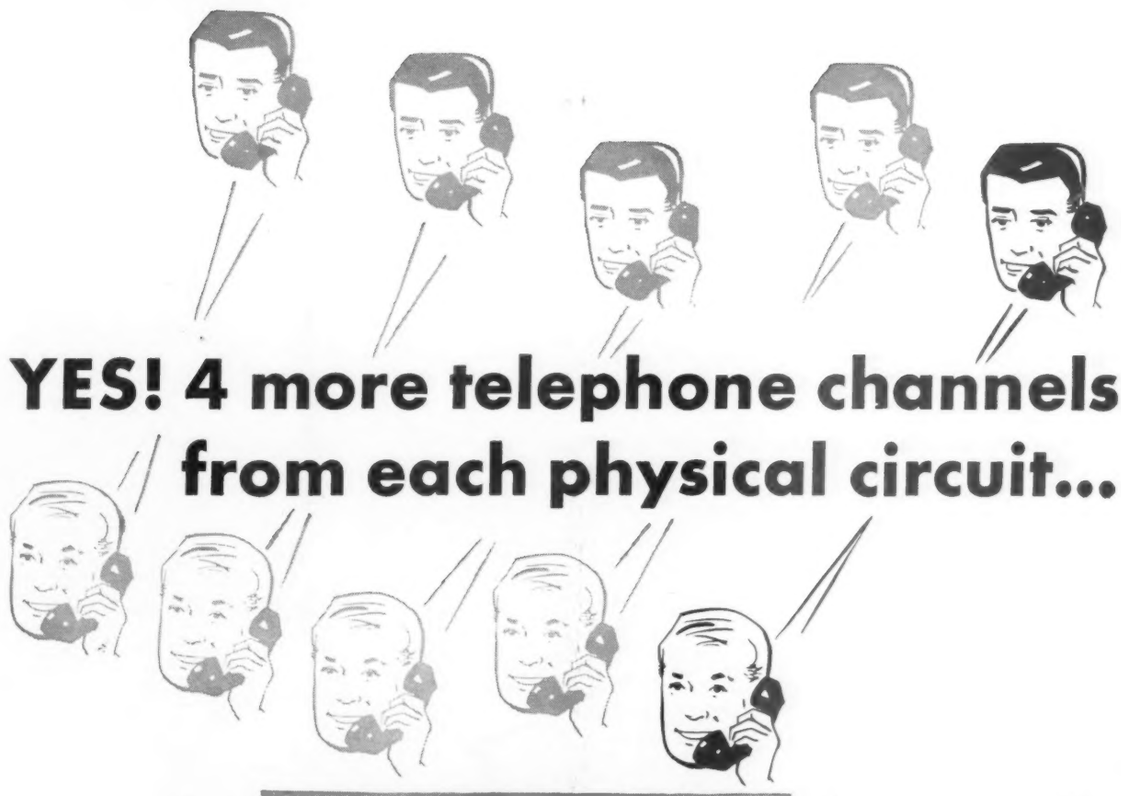
ENGINEERING & SIGNALING

As reported in the *Railway Age* of September 23, **R. A. Emerson** has been appointed assistant chief engineer of the CANADIAN PACIFIC SYSTEM at

R. A. Emerson

Montreal, Que. Mr. Emerson was born at Plum Coulee, Man., on April 12, 1911, and began his service with the C.P. in the engineering department in 1928 on a summer basis while attend-

(*Continued on page* 116)



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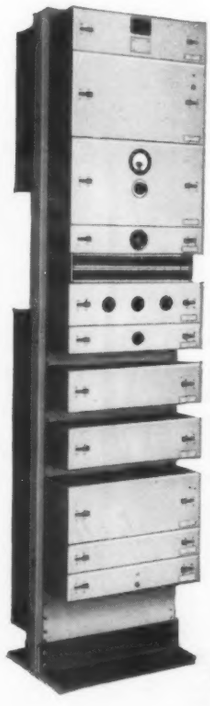

The new LENKURT Type 32C Carrier System provides four telephone channels with range up to 250 miles, and may be extended with repeaters.

With a LENKURT Type 32C Carrier System, supplied by Automatic Electric, you can provide additional telephone service simply by making full use of your *existing* physical plant. Get four more voice channels from each of your present physical circuits, without stringing a single wire!

That's *one* advantage of LENKURT Carrier. Here are other advantages:

Easily and quickly installed. **LENKURT'S Type 32C System is assembled, wired and tested at the factory. It's shipped ready for installation and operation from either a-c mains supply or office battery.**

Can be installed anywhere! **It's compactly designed to save valuable footage and fit easily in your present office layout. Mounted on 7-foot self-supporting rack, or any other rack specified, it takes up only 17″x21″ of floor space.**

Take advantage of these savings which Automatic Electric offers you, and get the most from your present investment. Remember, too, that under most conditions LENKURT carrier circuits actually provide better transmission than the physical circuit. Write for complete information today. Include details of your specific problem and we will rush complete engineering data.

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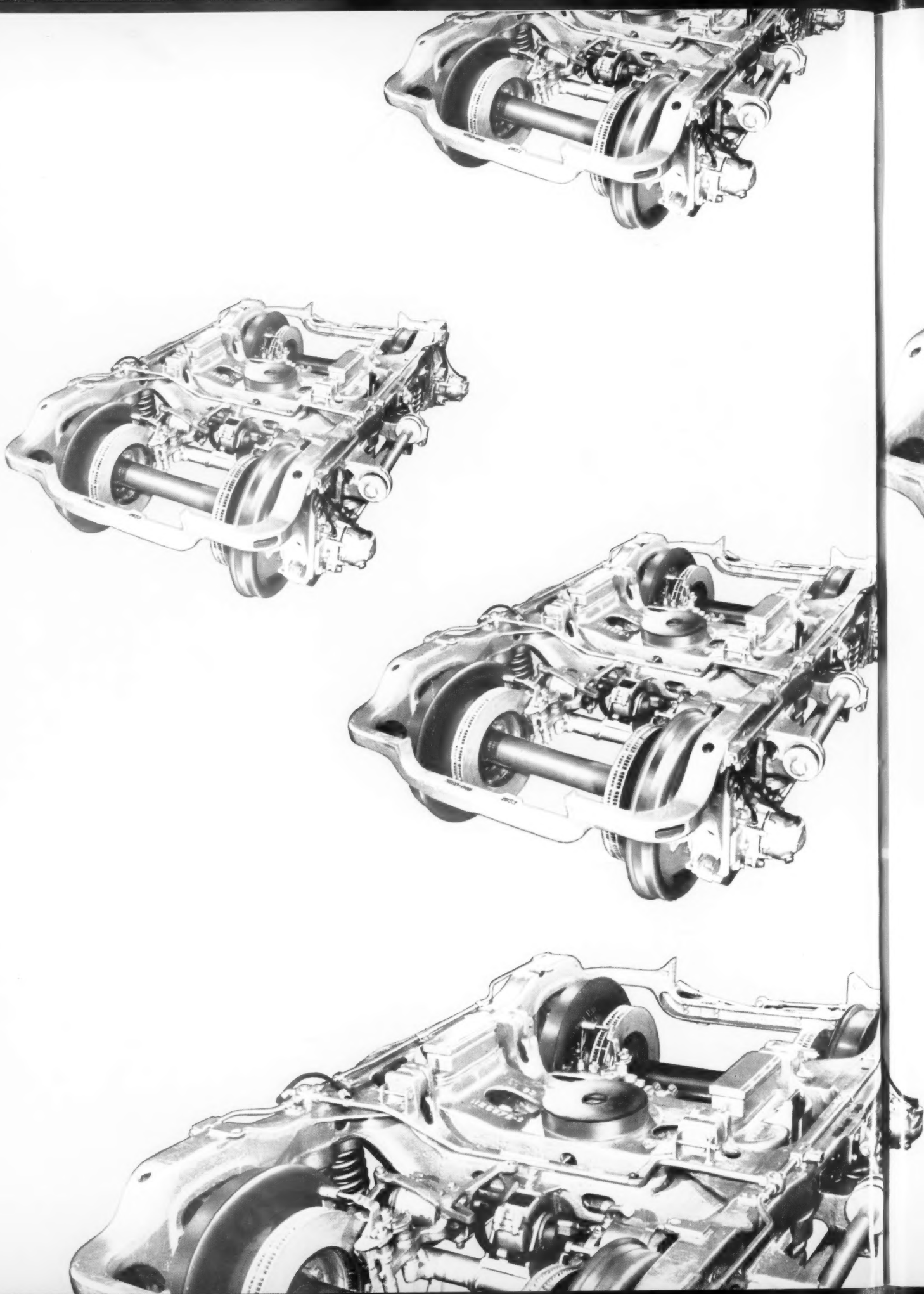

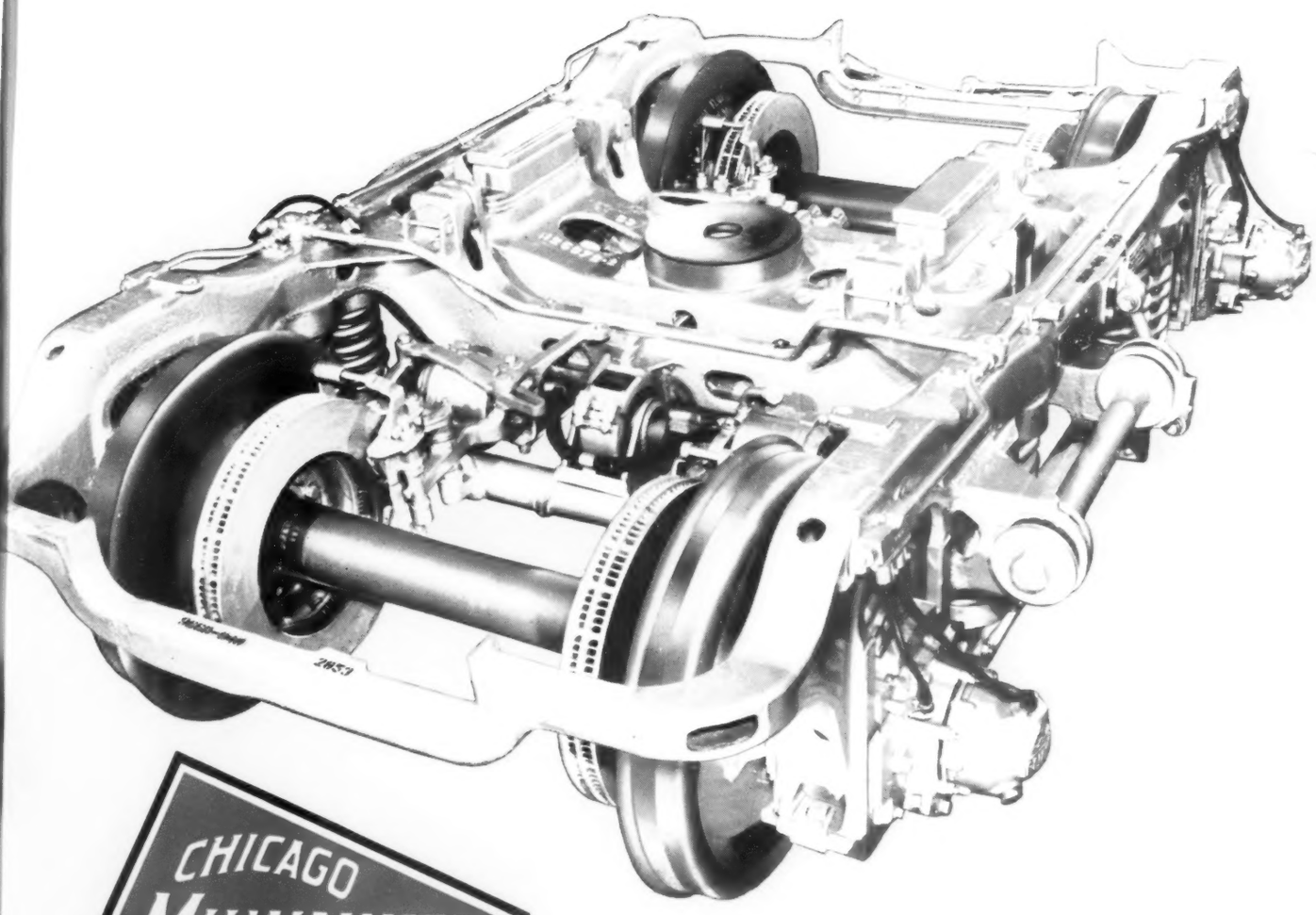

CHICAGO MILWAUKEE ST. PAUL AND PACIFIC

AGAIN THE MILWAUKEE ROAD ORDERS BUDD RAILWAY DISC BRAKES

The Milwaukee Road was one of the pioneer purchasers of the Budd railway disc brake.

This action was taken after breakaway tests showed the marked superiority of the disc brake in bringing cars to a stop.

Now, as part of the Milwaukee Road's overall modernization program, they have again placed an order . . . this time for thirty-one car sets of the latest model CF Budd railway disc brake. The Budd Company, Philadelphia 32.

Budd

OPERATING REVENUES AND OPERATING EXPENSES OF CLASS I STEAM RAILWAYS

Compiled from 127 monthly reports of revenues and expenses representing 131 Class I steam railways

(Switching and Terminal Companies Not Included)

FOR THE MONTH OF AUGUST 1950 AND 1949

Item	United States		Eastern District		Southern District		Western District	
	1950	1949	1950	1949	1950	1949	1950	1949
Miles of road operated at close of month	226,365	226,495	53,353	53,431	46,089	46,013	126,923	127,051
Revenues:								
Freight	$748,109,566	$606,037,387	$271,477,863	$215,869,957	$145,855,236	$113,521,430	$330,776,467	$276,646,000
Passenger	78,220,014	78,640,117	38,548,777	39,544,044	11,193,424	11,419,612	28,477,813	27,676,461
Mail	18,038,671	17,605,336	6,706,953	6,641,023	2,938,039	2,861,749	8,393,679	8,102,564
Express	8,842,600	7,545,662	3,159,137	1,934,914	1,234,788	1,285,992	4,448,675	4,324,756
All other operating revenues	36,585,234	32,943,747	15,741,178	14,324,113	5,620,888	4,868,024	15,223,168	13,751,610
Railway operating revenues	889,796,085	742,772,249	335,633,908	278,314,051	166,842,375	133,956,807	387,319,802	330,501,391
Expenses:								
Maintenance of way and structures	121,972,418	120,698,985	44,412,537	42,067,967	24,489,700	23,247,636	53,070,181	55,383,382
Depreciation	10,992,145	10,746,133	4,592,535	4,450,662	2,022,845	1,919,692	4,376,765	4,375,779
Retirements	1,734,021	1,958,067	596,311	276,428	302,262	179,384	835,448	1,502,255
Deferred maintenance	*119,065	*604,647	.....	.....	*60,352	*489,076	*58,713	*115,571
Amortization of defense projects	152,444	137,170	15,808	15,625	46,550	29,156	90,086	92,389
Equalization	*1,761,418	*3,231,562	*1,486,923	*2,360,071	101,561	*665,483	*376,056	*206,008
All other	110,974,291	111,693,824	40,694,806	39,685,323	22,076,834	22,273,963	48,202,651	49,734,538
Maintenance of equipment	151,000,844	135,086,119	65,332,464	55,511,257	28,386,174	26,365,458	57,282,206	53,209,404
Depreciation	25,196,395	23,926,798	9,426,240	9,332,474	5,603,614	5,295,509	10,166,541	9,298,815
Retirements	*28,461	*27,015	*3,863	*10,900	*16,703	*9,666	*7,895	*6,449
Deferred maintenance and major repairs	*160,161	*159,662	*87,542	*115,480	*10,461	*4,048	*62,158	*40,134
Amortization of defense projects	1,223,413	1,184,056	451,425	413,360	240,224	238,570	531,764	532,126
Equalization	779,129	1,328,626	1,006,297	1,382,956	*103,861	*135,333	*123,307	81,003
All other	123,990,529	108,833,316	54,539,907	44,508,847	22,673,361	20,980,426	46,777,261	43,344,043
Traffic	16,079,147	15,830,202	5,560,144	5,435,493	3,341,588	3,356,016	7,177,415	7,038,693
Transportation—Rail line	303,990,709	283,296,215	127,172,445	119,156,332	53,279,072	49,718,103	123,539,192	114,421,780
Miscellaneous operations	10,069,949	10,249,188	3,200,613	3,534,505	1,354,633	1,327,558	5,514,703	5,387,125
General	23,151,798	22,486,170	9,159,198	8,671,076	4,951,697	4,835,005	9,040,903	8,980,089
Railway operating expenses	626,264,865	587,646,879	254,837,401	234,376,630	115,802,864	108,849,776	255,624,600	244,420,473
Net revenue from railway operations	263,531,220	155,125,370	80,796,507	43,937,421	51,039,511	25,107,031	131,695,202	86,080,918
Railway tax accruals	126,476,664	75,343,380	36,945,262	23,053,344	29,822,547	13,962,394	59,708,855	38,327,642
Pay-roll taxes	23,418,743	21,875,502	9,634,960	9,030,046	4,356,771	3,973,110	9,427,012	8,872,346
Federal income taxes†	74,018,424	25,998,705	17,283,682	4,206,814	19,138,446	4,375,297	37,596,296	17,416,594
All other taxes	29,039,497	27,469,173	10,026,620	9,816,484	6,327,330	5,613,987	12,685,547	12,038,702
Railway operating income	137,054,556	79,781,990	43,851,245	20,884,077	21,216,964	11,144,637	71,986,347	47,753,276
Equipment rents—Dr. balance	11,407,428	11,272,109	6,479,071	4,327,574	*3,302,075	*860,437	8,230,432	7,804,972
Joint facility rent—Dr. balance	3,582,948	3,135,919	1,754,747	1,567,742	531,637	477,098	1,296,564	1,091,079
Net railway operating income	122,064,180	65,373,962	35,617,427	14,988,761	23,987,402	11,527,976	62,459,351	38,857,225
Ratio of expenses to revenues (percent)	70.4	79.1	75.9	84.2	69.4	81.3	66.0	74.0

FOR THE EIGHT MONTHS ENDED WITH AUGUST 1950 AND 1949

Item	United States		Eastern District		Southern District		Western District	
	1950	1949	1950	1949	1950	1949	1950	1949
Miles of road operated at close of month	226,501	226,803	53,361	53,468	46,120	46,212	127,020	127,123
Revenues:								
Freight	$4,923,460,513	$4,774,694,932	$1,838,422,171	$1,801,876,461	$1,017,021,643	$968,175,357	$2,068,016,699	$2,004,643,114
Passenger	530,367,811	591,303,118	280,135,001	305,636,944	80,858,776	94,392,618	169,374,034	191,273,556
Mail	142,011,689	143,089,347	51,948,210	52,562,601	24,843,042	25,601,237	65,220,437	64,925,509
Express	47,740,374	49,341,021	13,993,437	12,203,234	8,284,514	8,860,530	25,462,423	28,277,257
All other operating revenues	242,083,730	254,380,606	106,593,890	112,934,348	40,566,791	42,149,535	94,923,049	99,296,723
Railway operating revenues	5,885,664,117	5,812,809,024	2,291,092,709	2,285,213,588	1,171,574,766	1,139,179,277	2,422,996,642	2,388,416,159
Expenses:								
Maintenance of way and structures	838,930,416	898,261,011	293,146,791	318,969,841	178,249,084	180,117,796	367,534,541	399,173,374
Depreciation	86,813,097	84,585,318	36,306,431	35,576,452	15,681,761	14,670,191	34,824,905	34,338,675
Retirements	9,186,233	8,043,142	2,997,247	1,968,731	1,745,480	1,108,483	4,443,506	4,965,928
Deferred maintenance	*1,391,017	*2,510,557	*800,000	*328,422	*258,908	*1,184,149	*335,109	*997,986
Amortization of defense projects	1,203,671	1,183,915	141,116	123,366	355,617	359,584	706,938	700,965
Equalization	2,024,469	*9,568,250	*1,037,852	*6,081,968	5,070,362	*254,372	*2,008,041	*3,231,910
All other	741,096,963	816,527,443	255,539,849	287,711,682	155,654,772	165,418,059	329,902,342	363,397,702
Maintenance of equipment	1,094,771,670	1,101,976,396	457,921,024	451,778,125	213,526,585	220,329,468	423,324,061	429,868,803
Depreciation	196,035,799	183,754,705	72,848,833	71,173,883	43,971,951	41,155,962	79,215,015	71,424,860
Retirements	*357,800	*472,780	*62,293	*85,345	*171,395	*128,399	*124,112	*259,036
Deferred maintenance and major repairs	*9,102,920	*1,030,468	*8,590,945	*546,497	*102,949	*206,090	*409,026	*277,881
Amortization of defense projects	9,763,801	9,737,303	3,611,828	3,570,015	1,896,331	1,909,665	4,255,642	4,257,623
Equalization	3,208,309	1,631,282	2,825,500	1,314,831	349,578	499,996	33,231	*183,545
All other	895,224,481	908,356,354	387,288,101	376,351,238	167,583,069	177,098,334	340,353,311	354,906,782
Traffic	127,274,753	130,969,253	43,264,503	44,653,824	26,595,033	27,574,961	57,415,217	58,740,468
Transportation—Rail line	2,246,228,129	2,317,000,237	952,979,657	977,617,129	408,560,785	423,426,070	884,687,687	915,957,038
Miscellaneous operations	72,629,394	80,239,662	25,709,398	29,598,686	10,970,021	11,976,019	35,949,975	38,664,957
General	179,688,609	184,407,003	69,873,821	71,433,005	38,401,486	39,348,614	71,413,302	73,625,384
Railway operating expenses	4,559,522,971	4,712,853,562	1,842,895,194	1,894,050,610	876,302,994	902,772,928	1,840,324,783	1,916,030,024
Net revenue from railway operations	1,326,141,146	1,099,955,462	448,197,515	391,162,978	295,271,772	236,406,349	582,671,859	472,386,135
Railway tax accruals	650,876,004	559,291,862	209,572,667	195,144,739	155,571,729	125,548,399	285,731,608	238,598,724
Pay-roll taxes	170,685,583	172,311,740	70,104,399	70,784,839	32,342,653	32,924,375	68,238,531	68,602,526
Federal income taxes†	261,006,216	172,353,459	61,039,560	45,925,198	76,111,980	48,293,013	123,854,676	78,135,248
All other taxes	219,184,205	214,626,663	78,428,708	78,434,702	47,117,096	44,331,011	93,638,401	91,860,950
Railway operating income	675,265,142	540,663,600	238,624,848	196,018,239	139,700,043	110,857,950	296,940,251	233,787,411
Equipment rents—Dr. balance	92,177,965	83,508,869	44,410,098	37,538,293	*9,251,505	*5,889,575	57,019,372	51,860,151
Joint facility rent—Dr. balance	26,245,047	25,361,804	12,402,088	12,122,440	4,052,883	3,871,344	9,790,076	9,368,020
Net railway operating income	556,842,130	431,792,927	181,812,662	146,357,506	144,898,665	112,876,181	230,130,803	172,559,240
Ratio of expenses to revenues (percent)	77.5	81.1	80.4	82.9	74.8	79.2	76.0	80.2

†Includes income tax and surtax.
*Decrease, deficit, or other reverse item.
Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission. Subject to revision.

(Continued from page 110)
ing the University of Manitoba (B.S. in C.E. 1930). In 1933 he was awarded one of the five Strathcona Scholarships in transportation given annually by the graduate school of Yale University, and attended post graduate studies at New Haven, Conn., in 1933 and 1934. Mr. Emerson's permanent career with the C.P. engineering department started in 1935 as transitman at Revelstoke, B. C.; one year later he was transferred to the Regina (Sask.) division. He was appointed roadmaster on the Manitoba district in 1939 and division engineer of the Brandon (Man.) division in 1941, transferring to the Moose Jaw (Sask.) division in 1943. Mr. Emerson became assistant district engineer of the British Columbia district at Vancouver, B. C., in 1944 and was promoted to district engineer of that district two years later. In March, 1948, he was appointed engineer of track of the system at Montreal, in which position he served until his recent appointment.

James C. DeJarnette, division engineer of the RICHMOND, FREDERICKSBURG & POTOMAC, has been appointed chief engineer, with headquarters as before at Richmond, Va., succeeding **Edgar M. Hastings,** who retired on November 1, after nearly 47 years of service with that road. Mr. DeJarnette attended the public schools of Ashland, Va., and Randolph Macon College. He entered the service of the R. F. & P. 33 years ago as a rodman and was successively promoted to instrumentman, resident engineer at Fredericksburg, Va., assistant engineer—construction and maintenance, and supervisor of tracks. In 1943 he was appointed division engineer.

James C. DeJarnette

Mr. Hastings was born at Lutherville, Md., on May 5, 1882, and attended Baltimore, Md., public schools, Baltimore City College, Baltimore Polytechnic Institute and Virginia Military Institute (honorary alumnus). He entered railroad service with the Baltimore & Ohio in 1899 on summer work surveys, and subsequently served as rodman and instrumentman. He joined the R. F. & P. in December, 1903, and served as instrumentman and inspector on location and construction until 1906, when he was appointed resident engineer. Mr. Hastings held the latter position until 1920, when he became principal assistant engineer. In 1922 he was appointed chief engineer.

Edgar M. Hastings

J. G. Fry, roadmaster on the Eastern Lines of the ATCHISON, TOPEKA & SANTA FE, at Arkansas City, Kan., has

been appointed acting district engineer, Eastern district, Eastern Lines, with headquarters at Topeka, Kan., succeeding **H. E. Wilson,** who is on leave.

OBITUARY

Frank H. Clark, who was general superintendent of motive power of the BALTIMORE & OHIO from 1911 to 1919, died on November 3 in New Orleans, La., at the age of 87. Mr. Clark was technical advisor to the Ministry of Communications of the Republic of China from 1919 to 1927, when he established his own business as consulting engineer. Mr. Clark was a past president of the Western Railway Club, the Master Car Builders Association and the American Railway Master Mechanics Association.

E. O. Hemenway, land commissioner of the ATCHISON, TOPEKA & SANTA FE, died at his home in Albuquerque, N. M., on October 31.

Arthur E. Clark, 79, who retired in May, 1943, as secretary of the NEW YORK, NEW HAVEN & HARTFORD at New Haven, Conn., died on November 6 at his home in Hamden, Conn., after a brief illness.

T. Bronson Jewell, 61, who retired six months ago as attorney of the NEW YORK, NEW HAVEN & HARTFORD, died on November 5 at New York Hospital.

Current Publications

TRADE PUBLICATIONS

Kinnear All-Steel Rol-Top Doors. 12 pages, illustrations. Published by the Kinnear Manufacturing Company, Columbus 16, Ohio.

This bulletin on the Kinnear overhead-type door with galvanized steel sections gives complete specifications and describes typical installations.

Liquid Plastic Vinylite Protective Coating. Published by the Plastic Coating Corporation, Houston 19, Tex.

A bulletin on the use of a vinylite liquid plastic for protecting metal, wood or concrete surfaces. Following a discussion of the physical and chemical properties of the material, the bulletin tells how the coatings are applied and describes typical installations. One section of the bulletin is devoted to application of liquid plastic for protection of pipe. The concluding section gives data on use of liquid plastic with suitable flint abrasives to form non-skid coatings on wood, metal, concrete or canvas surfaces.

Stainless-Steel Curtain Walls. 24 pages, illustrations. Published by the Allegheny Ludlum Steel Corporation, Room 2036, Henry W. Oliver bldg., Pittsburgh 22, Pa.

A progress report on proposed methods of curtain-wall construction in which prefabricated sections of stainless-steel sheath-

ing backed by insulating material would replace masonry or other materials in exterior walls of buildings. Scale drawings are employed in the booklet to illustrate existing and planned types of stainless-steel curtain walls with specific attention to such details as facings, insulation, joints, vents, window sections, and shapes and textures.

Service Records for "Wolmanized" Pressure-Treated Lumber. 44 pages, illustrations. Published by the American Lumber & Treating Co., 332 S. Michigan ave., Chicago 4.

This report, the third in a series started in 1941, cites case histories of more than 55,000,000 bd. ft. of "Wolmanized" pressure-treated wood in service, and lists 581 specific installations where the wood has been used. The data, arranged in tabular form, are divided into "use" classifications. The introductory page to each section contains illustrations of specific structures referred to in the section.

PERIODICAL ARTICLES

Western Pacific Dream Realized! Western Pacific Mileposts, August, 1950, pp. 3-16. Published by the Public Relations department, Western Pacific, 526 Mission st., San Francisco 5, Cal. Single copies available on request.

A profusely illustrated account of the journey of the W.P.'s first passenger train through to the Pacific coast. The text is taken directly from an account of the event by the San Francisco Call of August 23, 1910, and deals extensively with the celebration accompanying the train's arrival at Oakland. The story is published to mark the 40th anniversary of the railroad.

FILM

Indian Paint. 16-mm. sound, color. 35 min. Available for showing on written application to the Colorado Fuel & Iron Corp., Continental Oil bldg., Denver 2, Colo.

The story of Colorado's steel industry. Discovery of iron ore is traced back to pioneer days when settlers found the Indians using hematite as face paint. Treats in a dramatic manner the mining of ore, the making of coke, blast furnaces and open hearth operations. Sequences show production of steel rail and other products used by railroads.

SPECIAL

Daily Federal Freight Report. Published by Trilane Associates, Inc., 1 Hudson st., New York 13. $100 per month.

This confidential bulletin, to be published Monday through Friday, offers carriers of all types opportunities to take advantage of the growing volume of freight shipments resulting from government contracts. The first issue, dated September 15, carried 108 listings, involving freight shipments totaling approximately 20 million pounds. Each listing includes complete information as to name and location of shipper; type of commodity involved; total poundage; origin and destination of shipment; and whether the goods will travel on commercial or government bill of lading.

(See also *Railway Age* of September 30, page 56.)

BOOK

Management Strategy in Collective Bargaining Negotiations, by William J. Baade, Jr., with the assistance of Morris Stone. 198 pages. Published by the National Foremen's Institute, Inc., New London Conn. Price, $5.

This book is a practical working reference, giving employers and management negotiators "inside" information on how to execute contracts that promote peaceful labor relations and that at the same time permit efficient business operations. It is divided into five sections that deal with the "know-how" of labor negotiations. They are: why unions act as they do; union management relations and the law; basic union aims and management bargaining strategy; safeguarding management rights; and conduct at the bargaining table. In addition, there is an appendix that gives the text of the Labor Relations Act as well as a sizeable index on specimen contract clauses. In these practical sections are actual specimen clauses used by companies in their labor agreements, including pointers on how to select the right clause to fit particular agreements; and in addition, there are employer tips on how to avoid the pitfalls that lead to legal difficulties, whether the company or plant is unionized or not.

PAMPHLETS

American Trucking Facts. 8 pages. Published by American Trucking Associations, Inc., 1424 Sixteenth st., N.W., Washington 6, D. C. Free.

Contains background information about the trucking industry for editors, writers and others. Included is information on truck registrations by years since 1904, sources of trucking industry information, data on the "trucking industry" and trucks and modern living, the American Trucking Associations, the "trucking industry" and national defense, truck terms, and state associations affiliated with A.T.A.

Transit Fact Book, 1950. 16 pages. Prepared by American Transit Association, 292 Madison ave., New York 17. Free.

This annual summary of basic data and trends in the transit industry of the United States includes statistics on number of companies, mileage, equipment, revenues, traffic, employees, payroll, and expenditures for materials.

The Welfare State and the State of Human Welfare. 60 pages. Published by Chamber of Commerce of the United States, Washington 6, D. C. 50 cents.

Should the American people endorse or reject the welfare state? That is the debate subject for high schools and many colleges throughout the country for 1950-51. This report attempts to bring together the pro and con arguments. It tries to state both sides of the argument and to set forth the nature of the welfare state as well as the nature of the choices before us.

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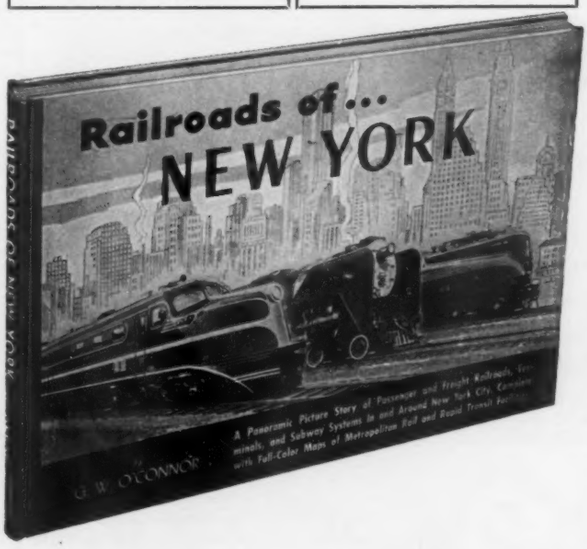

This new book is beautifully illustrated with 116 fine 8½ x 5-inch photographs of railroading in and around New York. Authoritative information is given on how this intricate rail network operates. Latest official five-color New York Harbor Terminals and Rapid Transit System maps show all points of interest to railroad men. Ask to see a copy at your local bookstore or send for one on ten days' approval.

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HELP WANTED

WATER WORKS SALES ENGINEER

Equipment manufacturer offers permanent sales engineering position in contacting water works and sewage consulting engineers, engineers in municipal departments and pipe companies. Work begins prior to writing of specifications and follows through to final bidding of jobs. Considerable traveling in central part of United States, probably working out of Chicago office. Fixed salary. Excellent opportunity for man over 35 with proper technical background, preferably with actual experience in selling equipment to water works. Submit qualifications, together with salary requirements to Personnel Manager.

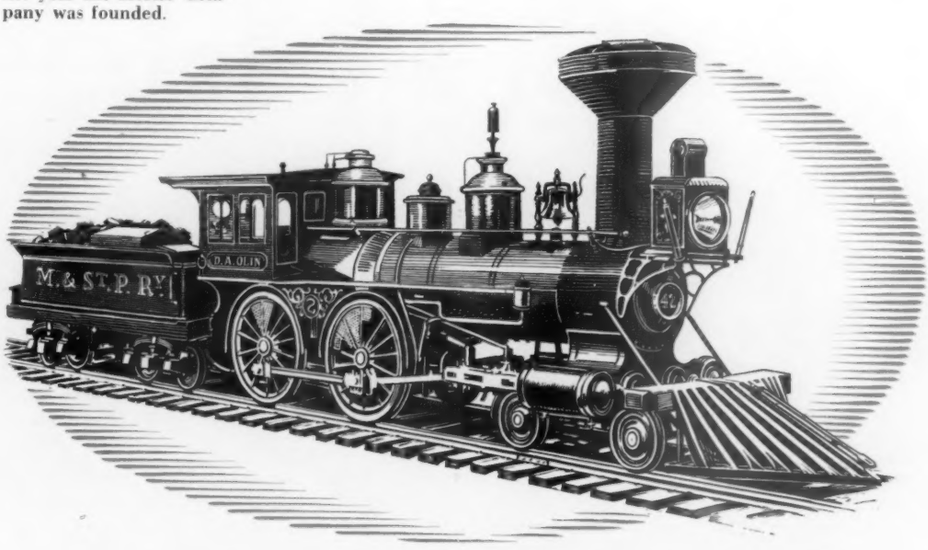
Dresser Manufacturing Division
Bradford, Pa.

USED EQUIPMENT To Sell?
Advertise It In
The CLASSIFIED DEPARTMENT

Advertisers

IN THIS ISSUE

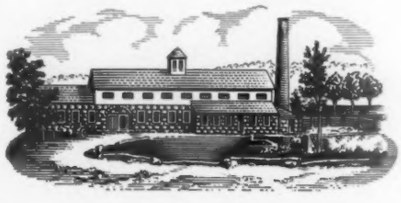
The "D.A. Olin" built by the Milwaukee in 1854, the year the Kerite Company was founded.



CONGRATULATIONS to a CENTENARIAN!

From a Youngster of 96

The Milwaukee Road leaves a notable record of achievement in its first 100 years. May your next 100 years be as fruitful of service to the 12 Midwestern and Northwestern states you have served so well! In 1854—the year the Milwaukee made its first run to the capital of Wisconsin—the Kerite Company came into being. We are proud to be numbered among the suppliers of this great railroad.



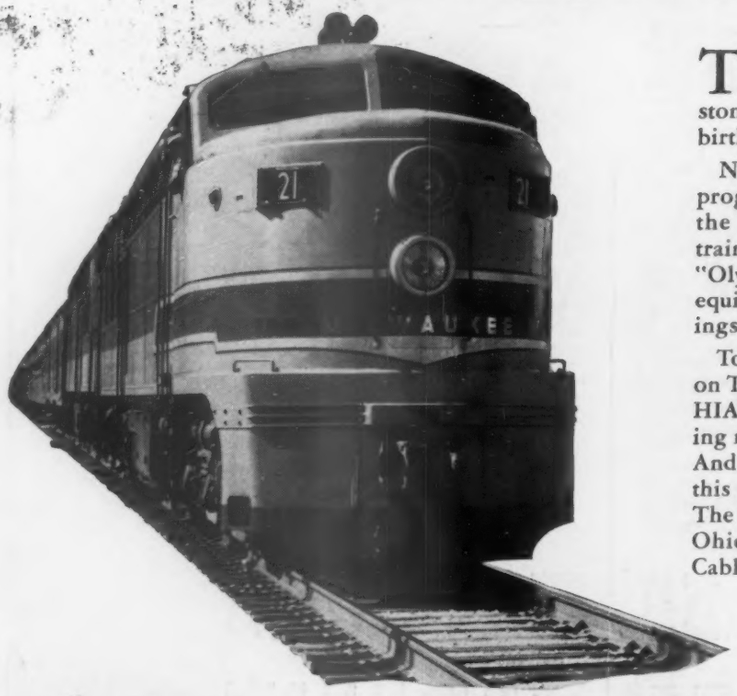
The Kerite plant, circa 1860.

THE KERITE COMPANY

NEW YORK CHICAGO SAN FRANCISCO LOS ANGELES

Kerite Insulation—Your Cable's Best Life Insurance

Another milestone for the pioneer of roller bearing passenger trains!



THIS year the Chicago, Milwaukee, St. Paul and Pacific Railroad passes another milestone in its outstanding growth. It's the 100th birthday of the Milwaukee Road!

Noted for its many contributions to railroad progress, one of the Milwaukee's greatest was the pioneering of roller bearing passenger trains. In 1927, the "Pioneer Limited" and the "Olympian" passenger trains were completely equipped with roller bearings. All of the bearings were Timken®.

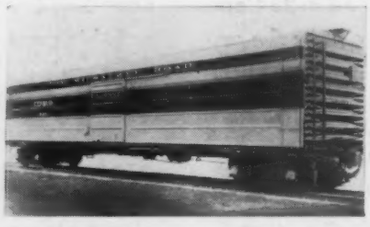
Today, the Milwaukee has 606 passenger cars on Timken tapered roller bearings. Its Olympian HIAWATHAS provide a fast, smooth, roller bearing ride from Chicago all the way to Puget Sound. And you can look for even bigger advances in this great railroad's second century of progress! The Timken Roller Bearing Company, Canton 6, Ohio. Canadian plant: St. Thomas, Ontario. Cable address: "TIMROSCO".

THE MILWAUKEE revolutionized passenger service by equipping this train completely with Timken bearings, in 1927.

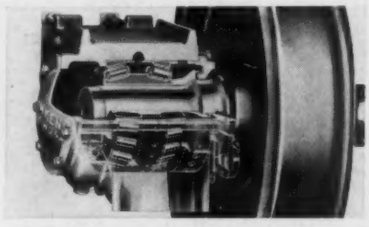
TODAY, 606 passenger cars on the Milwaukee Road are Timken bearing equipped.

STEAM LOCOMOTIVES on the Milwaukee using Timken bearings for one or more applications now total 72.

22 DIESEL locomotives on the Milwaukee Road now roll on Timken tapered roller bearings.



FIVE 50-TON freight cars on Timken bearings speed the Milwaukee's freight. Three business cars are also Timken-equipped.



TIMKEN BEARINGS on railroad axles provide a fast, smooth ride for passengers or freight, promote business, save money.

TIMKEN *TAPERED ROLLER BEARINGS*

TRADE-MARK REG. U. S. PAT. OFF.

NOT JUST A BALL NOT JUST A ROLLER THE TIMKEN TAPERED ROLLER BEARING TAKES RADIAL AND THRUST LOADS OR ANY COMBINATION

FOUNDED IN 1858